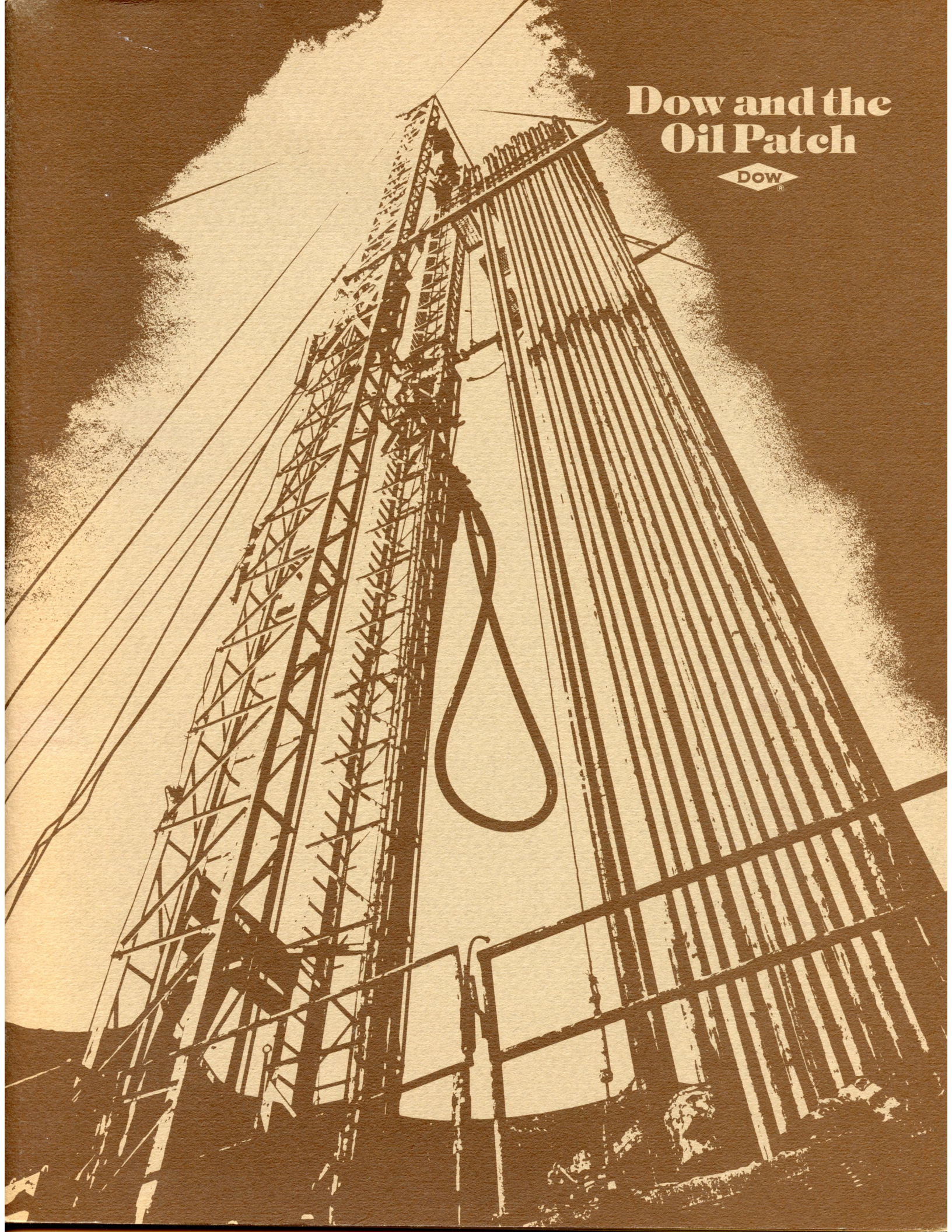


Dow and the Oil Patch

DOW[®]



*This book was compiled
by Clark M. Thompson
for Dow in 1973. Picture
of him on inside back
cover. (It's a summary of
Historical Data.)*

**“For some, this
effort will spark
memories . . .
pleasant, we hope—**

**For others, it will
provide information
that might not have
been known.”**



Macauley Whiting

In February, 1974, I announced the establishment of the Oil & Gas Division, Dow Chemical U.S.A. It was formed in Houston to handle accelerated exploration and acquisition of oil and gas.

At the time, I noted that it would include the activities of the Brazos Division.

Now . . . when you start a new venture you're counting on its success . . . To help insure it, I believe you must acknowledge the past, interpret its history and be influenced by the experience.

While reviewing our past it occurred to me that employees of the Oil & Gas Division and others might also find it interesting.

Thus, the emergence of this booklet. In it we have collected some events of the past 28 years. We have a proud heritage. It began as the Brazos Oil and Gas Company in 1946. In 1955, it became the Brazos Division of Dow, and operated as such until the formation of the new Oil & Gas Division.

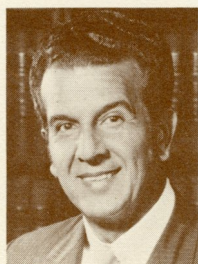
Dr. A. P. Beutel created Brazos out of the need at that time for an "in-house" operation to supply Dow plants with natural gas and hydrocarbon feedstocks.

In this mission, Brazos has been uniquely successful. Brazos laid the groundwork for Dow's ties with the oil industry and we continue to grow from this base.

This growth process has now entered a new and exciting phase. The scope of our operations has been expanded in response to the increased need for oil and gas. Change has been constant in our business but lately the pace has accelerated. To stay ahead of the competition we recently streamlined our division with two major reorganizations . . . the establishment of the reserve area managers and the creation of the assistant general manager's position. Both are aimed at aggressively seeking joint exploration ventures with other companies.

These innovations are reflected in our new name . . . The Oil & Gas Division. It more accurately describes our wider objectives throughout the world.

Macauley Whiting



VINCENT H. BUCKLEY
Newly-appointed assistant general manager



Luther Evans

As our new division embarks on its expanded mission, for oil and gas, it is appropriate to recognize our heritage . . . the past 28 years of Brazos operations.

Since we've always been a close-knit group, the events are presented in an informal manner, similar to a family album.

We've included photographs, news clips and charts that involve Brazos' history back to its inception in 1946. Summaries of events as they occurred each year are also included.

For some, this effort will spark memories—pleasant—we hope. For others, it will provide information that might not have been known. For all, it is our wish that it will help foster the “family feeling” of closeness upon which we have grown during the last 28 years—and upon which we will build for the future.

Luther Evans

SUMMARY OF MANAGEMENT PERSONNEL

Bart DeLaat	General Manager	1947-1952
O. W. Lyons	Operations Manager	1952-1953
O. W. Lyons	General Manager	1953-1956
O. W. Lyons	Manager of Operations	1956-1958
L. B. Swan	Executive Vice President	1953-1959
R. A. Beutel	General Manager	1958-1967
Luther Evans	General Manager	1967-Present

SUMMARY OF OFFICERS

Brazos Oil and Gas Company

President — A. P. Beutel	1946-1955
Executive Vice President — L. B. Swan	1953-1955
Vice President — N. D. Griswold	1946-1955
C. F. Reed	1946-1953
Vice President and Treasurer — C. A. Gerstacker	1953-1955
Secretary — J. P. Bryan	1946-1955
Treasurer — D. J. Landsborough	1946-1953

The Dow Chemical Company — Brazos Division

President — A. P. Beutel	1955-1966
Executive Vice President — L. B. Swan	1955-1958
Vice President — N. D. Griswold	1955-1958
Vice President and Treasurer — C. A. Gerstacker	1955-1958
Secretary — J. P. Bryan	1955-1958
R. J. Fields	1958-1966
Treasurer — C. M. Thompson	1958-1966

In 1966, Macauley Whiting assumed the responsibility of directing all Brazos Division activities.



Dr. A. P. Beutel

❁ 1946 ❁

Brazos Oil and Gas Company was incorporated in Texas December 18, 1946. The charter set forth the purpose of the company: "To store, transport, buy and sell oil, gas, salt, brine and other mineral solutions and liquified minerals; to produce oil and gas, and to do all things incident thereto."

The first officers of the company were: Dr. A. P. Beutel, president; N. D. Griswold, vice president; J. P. Bryan, secretary; and D. J. Landsborough, treasurer.

Dr. Beutel was president of the company until its merger with Dow in 1955. He continued in this position with the Brazos Division until 1966. During this period, Dr. Beutel maintained a strong interest, closely directed its activities, and was a dominant force in establishing its goals.

In 1966, Macauley Whiting took over the responsibilities of directing all division activities. He named Luther Evans general manager in 1967.

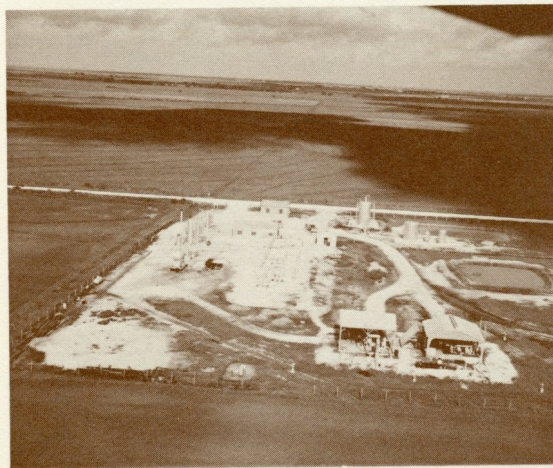
The first property acquired by Brazos was the Collegeport Gas Field in Matagorda County, Texas. This field was purchased for \$2,400,000 from the Continental Oil Company and Pure Oil Company.

❁ 1947 ❁

Bart DeLaat was employed as general manager on August 21, 1947. One of his first authorizations in his new position was to construct 25 miles of gathering line and 20 miles of road in the Collegeport Field in Matagorda County. During that same month, September, Brazos established offices in the City National Bank, Houston.

The first well drilled by the company was started December 10, 1947 on the LeTulle property in the Collegeport Field. It was completed as a gas well in January, 1948. Later that year, the directors authorized leasing the Powderhorn Ranch in February, together with additional leases in the area later in the year.

The first contract for sale of gas from Citrus Grove and Collegeport was approved May 12. This contract with The Dow Chemical Company set forth a price of \$.065 per MCF.



Collegeport Meter Station

❁ 1948 ❁

Brazos acquired the holdings of the MacDannald Oil Company in the Magnet-Withers Field in Wharton County, Texas for \$1,500,000 and the first gas deliveries were made to the Texas Division in April.

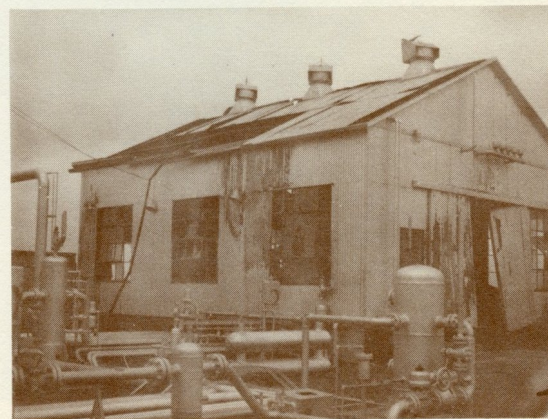
The company filed for a permit to do business in the states of Oklahoma and California.

The holdings of R. Y. Smith in the Withers Field were acquired for \$600,000 and the first development on the Powderhorn Ranch was authorized in November.

During this year, negotiations were carried on with D. D. Feldman applicable to the purchase of an undivided interest in approximately 8,000 acres adjoining the Rio Vista Field, Sacramento County, California. The property was obtained in the spring of 1949 with Brazos designated as the operator.

❁ 1949 ❁

Brazos entered the Angleton Field by accepting a one-half interest in the Sun Oil Company's holdings. Sun was to recover its investment from the remaining one-half interest, after which time its interest was to be reduced to an over-riding royalty not to exceed $\frac{1}{8}$ th.



Exploration of the Cannon Creek Prospect in Michigan was first authorized in September, and five wells were drilled this year, resulting in two gas wells and three dry holes. The discovery well was the No. 1 Miltner Shaffer Community Well.

Other drilling was principally in the Powderhorn Area in Texas and Isleton Area in California.

❧ 1950 ❧

Brazos acquired all the working interest in the oil and gas properties of the MacDannald Oil Company situated in the Lakeview Field, Wharton County, Texas on August 1 for \$750,000 plus a production payment.

Purchase of the $\frac{1}{4}$ th working interest of the Atlatl Royalty Corporation in the Peach Point Area, Brazoria County, Texas was authorized for \$500,000.

The Pacific Gas and Electric Company constructed pipelines to the River Island Field in California and first production was sold during this year.

All gathering lines in the Collegeport Field were sold to Dow during this period.

The oil and gas rights of R. Y. Smith, Grey Wolfe Drilling Company and Fred M. Sayre in the Magnet-Withers Field were acquired for \$813,000.

The drilling of 19 wells in California was principally in the Isleton-River Island Area; Cannon Creek accounted for most of the 29 wells in Michigan. The drilling of 38 wells in Texas was principally in Matagorda and Wharton Counties. Two discoveries were made this year; one in California and one in Texas.

❧ 1951 ❧

Brazos entered into a joint operating agreement with Union Oil Company of California, as Operator, for the purpose of acquisition, exploration, developing and producing lands in an area of the Sacramento Valley. Each party assigned to the other an undivided one-half interest in leases presently held. Brazos excluded leases in the Rio Vista, Isleton, River Island and North Andrus Island Areas. To equalize acreage, Brazos paid costs and expenses involved in the purchase for the joint account of approximately 8,000 acres. Also, Brazos made an additional expenditure of \$200,000 which included lease acquisition and geophysical work for drilling operations, in consideration for access to geophysical and exploration data heretofore acquired by Union in the Sacramento Valley.

The Cedar Lake Area, later to be designated the Cow Trap Field in Brazoria County, was developed and placed in production during this year.

Drilling in California was done in the Los Angeles and Sacramento Area and accounted for 10 wells; Michigan drilling included a total of 15 wells in the Rose City Area. A total of 19 wells were drilled in Texas. This resulted in two discoveries in California, one in Michigan and four in Texas.



❁ 1952 ❁

During this year the first agreements were made with Dow providing for contributions to the cost of drilling and completing certain wells:

- (a) Clemens Dome Area, not to exceed \$136,500,
- (b) Collegeport Field, not to exceed \$374,900,
- (c) Powderhorn Field, not to exceed \$260,200,
- (d) South Sargent Area, not to exceed \$83,800,
- (e) Angleton Field, not to exceed \$174,300

In October, Brazos entered into joint operations in the Powder River Basin, Wyoming with Union Oil Company under terms of a Joint Operating Agreement under which Brazos acquired a one-half interest in all acreage held by Union or later acquired by it in the joint operating area, and under which Brazos agreed to pay 100 per cent of the first \$1,250,000 expended for geophysical expense, lease acquisitions, overhead, and drilling one deep well less one-half of rentals on leases.

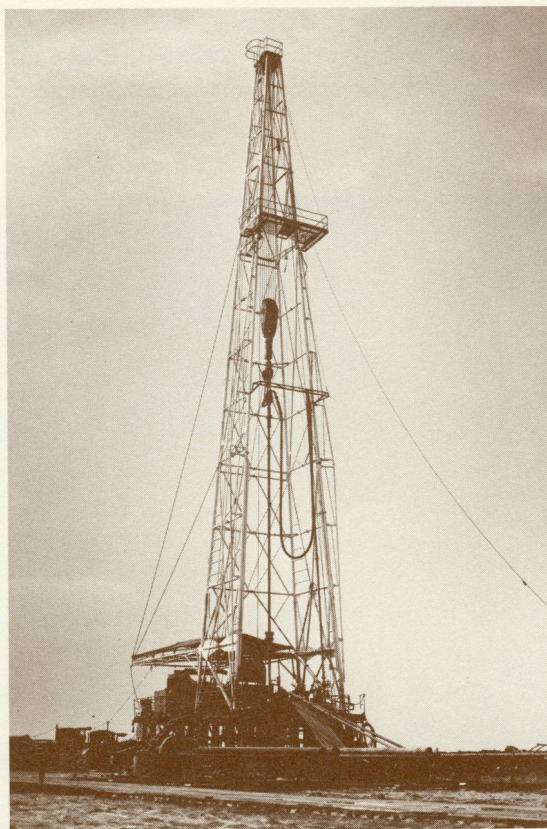
Drilling included 12 wells in California; 11 in Michigan; and 17 in Texas, resulting in one discovery in Michigan and two in Texas.

DeLaat resigned in October and his duties as general manager were assumed by J. P. Bryan, secretary and vice president, and by O. W. Lyons, operations manager.

Also in November, a Geological Department was established and C. A. Gerstacker was elected vice president and treasurer.

An exploration program of the shore line of the Texas Gulf Coast, to include analysis of subsurface evidence, establishment of engineering controls, gravity and seismic operations was approved.

The first two wells were drilled in Wyoming, resulting in one oil well and one dry hole. The remaining 30 wells were in California, Michigan and Texas, with Texas accounting for 15 wells.



❁ 1953 ❁

Bottom hole money agreements between Brazos and Dow were agreed to, as follows:

- (a) Fletcher Trust, Sale Lake Area, not to exceed \$129,000,
- (b) Houston Farms Development Company, Alligator Point Area, not to exceed \$183,300.

In November, L. B. Swan was elected executive vice president and O. W. Lyons was designated general manager.

❖ 1954 ❖

Brazos acquired an undivided three-fourths interest of J. P. Petkas in the SCAR Field in Jackson County, Texas for \$22,000, oil and gas leases in the Green Lake Field, Calhoun County, Texas from Armstrong and Horn and C. B. Mahaffey for \$150,000 and \$100,000, respectively, and oil and gas leases owned by W. C. McBride, Inc., and W. D. Trammell for \$250,000.

During this year, 21 of the 31 wells were drilled in Texas, principally in Jackson, Calhoun, Wharton and Matagorda Counties, resulting in

two discovery wells in Texas.

An Insured Retirement Plan for employees was established with the Metropolitan Life Insurance Company.

❖ 1955 ❖

In October, the Brazos Oil and Gas Company merged with Dow and became the Brazos Oil & Gas Division.

Brazos drilled 38 of its 50 wells in Texas this year, resulting in two discoveries in Texas.



Dr. A. P. Beutel

❧ 1956 ❧

The working interest of J. C. Roberts in the Collegeport Field was acquired and the remaining one-fourth working interest in the SCAR Field was purchased from J. P. Petkas.

All the issued and outstanding capital stock of the Schwing Lumber and Shingle Company, Inc., Plaquemine, Louisiana was purchased December 14 for approximately \$12,061,000.

The principal drilling activities were again in the Texas Coastal area where 20 of the 34 wells were drilled with two discoveries being made in Texas.

❧ 1958 ❧

Retrenchment continued, resulting in substantial write-offs to reduce acreage holdings in Michigan and Texas. Also, Brazos essentially terminated its Wyoming operations.

Production of gas fell to the lowest level since 1953, due to reduced plant demand in the Texas Division. Oil production was the lowest since 1950, due to reduced producing days and decline in condensate production.

Sixteen wells were drilled, resulting in one discovery in California.

❧ 1957 ❧

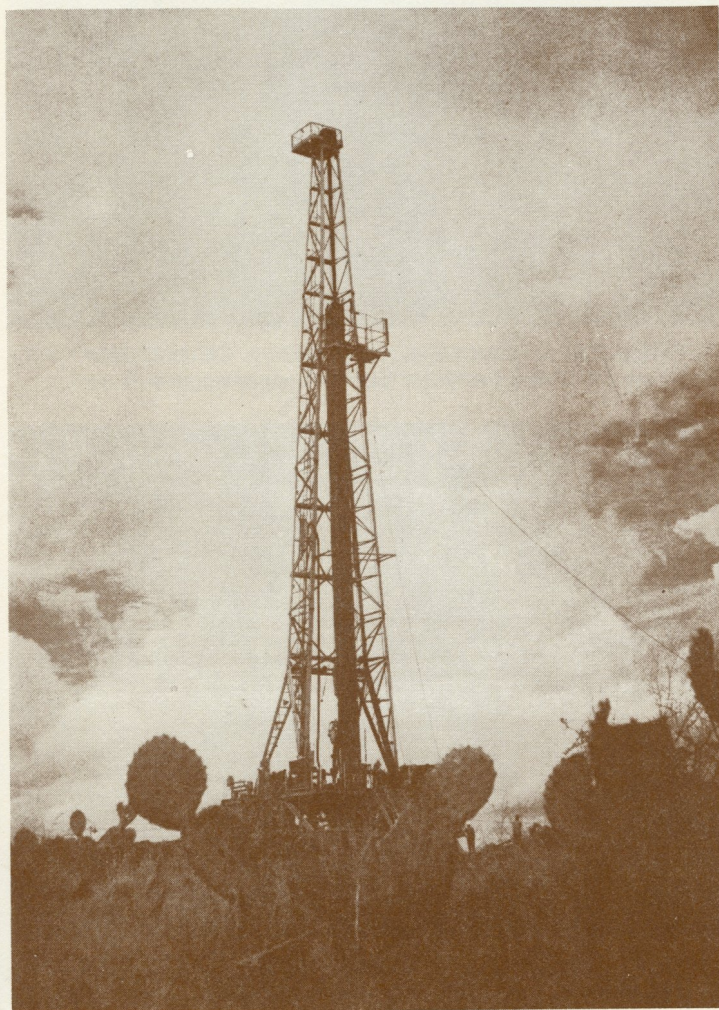
This year was a period of retrenchment, conforming with general economic conditions. This resulted in reductions in drilling and personnel.

During this year, Brazos disposed of its interest in the Rose City Field, Hamlin Field and the Aetna Area, in Michigan.

❧ 1959 ❧

Drilling activities increased sharply in the Brazos-discovered Person Field in Karnes County, Texas. Twenty-eight wells were drilled this year with a discovery in California and two in Texas.

Brazos experienced a further decline in gas production, due to assisting the Texas Division in shifting demand to more recent contract sources. Oil production increased, principally as a result of initial production from Person Field and some new development in the Powderhorn Field.



BRAZOS OIL AND GAS NO. 1 OTHO D. PERSON
Drilling rig towers over cactus in Karnes County.

Brazos Completes Discovery Oil Well

Brazos Oil and Gas Company, a division of Dow, last weekend completed a promising discovery well in Karnes County some 50 miles southeast of San Antonio.

The well appears to be the most important discovery in the entire South Texas section since Fashing was opened in deep Edwards Lime in 1956. The discovery also is one of the most exciting things that has happened in Brazos Oil and Gas since it was established by Dow in 1946.

Brazos Oil and Gas No. 1 Otho D. Person, a wildcat in the Helena-Panna Maria-Gillett area of far northeast Karnes County, is located on a 637-acre lease in Jesus Hernandez Survey, A-140. Ground elevation is 343 feet.

The well will produce from perforations at 10,886-10,900 feet. On a 14-hour drill stem test, without acid treat-

TDI to Open 18th Season This Month

The Texas Dow Institute this month opens its 18th season.

A letter to members and prospective members—including the 1959-60 membership blank—will be distributed later this week.

The first meeting of the new season will be held at 6:30 p.m. on Tuesday, September 22, at the Plant B cafeteria. The program will feature "Early Days of the Oil Industry." The speaker will be Claude Harkins of the Ethyl Corporation. Tickets will sell for \$1 each and will go on sale the week of September 14 at Texas Division reception desks.

H. H. McClure, TDI vice-chairman and program chairman, currently is making arrangements for at least nine programs. Some of the topics include synthetic gems, the automobile of the

Related news on pages 2, 3

ment, flow was at a daily rate of 371 barrels of 39 plus gravity pipeline oil. The test was through 1/4-inch choke with 900 pounds pressure and the gas-oil ratio was 1,425-1.

The well was drilled to total depth of 11,130 feet on July 26 after spudding in on June 14. Top of the Edwards Lime was picked up at 10,802 feet.

After the well was bottomed, initial tests indicated that the well would be a dual discovery with good flows recorded from two Edwards Lime zones through perforations from 10,980-11,000 feet and 10,936-10,950 feet. Flow was at a rate of 775 barrels per day at 10,936-10,950 feet and 364 barrels per day on a test of the lower section—a potential of 1,139 barrels per day from the two zones. However, mechanical difficulties were encountered, so the project moved to the upper zone at 10,886-10,900 feet for commercial production.

The well was officially completed August 28, and tested at a daily rate of 650 barrels of 38.9 API gravity oil on 17/64-inch choke, flowing with 1,575 pounds pressure and with a gas/oil ratio of 1,430 cubic feet per barrel. State regulations will permit 225 barrels of oil per calendar day to be taken from the well as a reward for discovery rather than the nine days per month permitted old production.

The Buzzini Drilling Company, of San Antonio No. 8 rig, which drilled the Brazos discovery well, this week is scheduled to spud at the Brazos No. 2 Person. Conductors casing already has been installed at the No. 2 site, 2,600 feet from the No. 1. Roads, pits and other site preparations have been completed.

Heater treatment installations, storage tanks, and tank truck loading facilities (See BRAZOS on page 4)

Related picture on page 5

future, Dr. A. P. Beutel's trip to Africa which he and Mrs. Beutel made earlier this year, sea water conversion plants, and the income tax. The TDI also will hold joint meetings during the year with the Brazosport section of the American Chemical Society and the Gulf Coast chapter of the Texas Society of Professional Engineers.

Attendance at last year's nine TDI sessions totaled 3,989—a record year. Programs last year included coastal geology, Zefran, space flight, the stock market, high fidelity and stereophonic sound, engineering in space age, the golden age of medicine, a chemical murder case, and a Dow film at the annual barbecue which closed the season.

C. H. Boyd, Rectifier-Halides, is serving as TDI chairman this year. Mc- (See TDI on page 5)

Lost Time Toll Two for August, 16 for the Year

The Texas Division had only two lost time accidents in August, bringing the total for the year to 16 compared with 24 for the first eight months of 1958.

The two lost timers last month both were charged on August 15.

C. B. Whittle, Polyethylene operator, injured his right knee when he slipped and fell after stepping in some oil that had dripped from above onto a concrete floor.

F. A. Fradella, Plant B boilermaker, received injuries to his right shoulder and arm when struck by a traveling block of an electric hoist when the dead-end of the hoisting cable broke as the bottom head of a reactor was being lifted into place.

Industrial Health Council Named By Dr. Beutel

An Industrial Health Council has been appointed in the Texas Division by Dr. A. P. Beutel.

The new council will function much in the same way as the Executive Safety Council in coordinating Industrial Health activities for the division as a whole.

Luther Evans, Executive, has been named chairman of the council. Dr. D. J. Kilian, medical director of Industrial Health and Medicine, serves as secretary.

Other council members are W. E. Roush, Executive-Organic Production; A. F. Shorkey, Alkali Products; J. L. Tod, Executive, and T. J. Walker, Employee Services.

Holiday Monday

The Texas Division will observe a regular holiday on Labor Day, Monday, September 7.

Brazos Discovery Rolls Out the Barrel

THEY'RE dancing the Brazos Polka in Karnes County, which nestles in the valley of the San Antonio River in South Texas.

For many years a quiet farming and livestock raising area, Karnes County now is the scene of feverish oil activity since Brazos Oil and Gas Company's discovery well opened Edwards Lime oil production for the area.

The county, with a population of about 20,000, has some shallow oil activity, but is known primarily as the leading flax county of Texas. In some years, Karnes has led the U.S. in flax production, with 200,000 bushels from 60,000 acres in seasonable years. But the drouth of recent years had been rough on Karnes County as in the rest of the state. While the county has been shaking off the effects of the drouth, the oil activity has given Karnes County people a tremendous boost.

Nancy Heard, oil editor of the San Antonio Express and News, reporting recently on the Brazos No. 1 Person wildcat, said that if the well were a success it "would be almost too good to be true."

The nearest community to the discovery well is Panna Maria, the oldest Polish settlement in Texas, established December 24, 1854.

The descendants are a hardy breed who work the soil and tend their stores as their fathers and grandfathers did. And the women are good cooks, good mothers, and good partners for a polka.

The people on both sides of the San Antonio River, which runs through the middle of the county, are predominately Catholic and many of their activities center around the church.

Karnes County—like many others today in Texas—is a sharp contrast of the old and the new, the past and present, as it steps into a new era of industrial and economic development.

You see:

—The woman wearing a faded blue sunbonnet while pushing a bright red power mower in her front yard.

—Monumental Catholic churches standing sentinel over the rolling countryside as sleek autos whiz by on the farm-to-market highways.

—Rambling ranch-style homes down the road from the rough-hewn little houses with tumbling brick chimneys and silent windmills.

—A \$200,000 county hospital in Karnes City, architectural drawings for new schools, stores with glass fronts next to old stores with false fronts, all in contrast to the quiet crossroads in the country and a community that once was known as "toughest place on

earth," according to the Texas Almanac.

Karnes County has some of the old country in it, all right, but it's Texas from its underground resources to its mesquite trees and cactus and clean-tasting air. And horned toads and red ants, ground squirrels and rabbits, the dove and quail and bass.

When oil field equipment trucks groaned along the paved and dirt roads leading to the Brazos No. 1 Person, the wild life scurried for cover, but the people followed to see the show.

On Saturdays and Sundays, they parked their cars along the fence line and got out. It was like a ball game, with the men standing out in front of their cars, watching the drilling operation, and the women and children watching, too, from the cars—sometimes getting out to visit a neighbor or relatives and to stretch their legs.

When the rigging went up at 3 a.m. one Sunday morning back in June and the lights went up on the superstructure, the drilling crew saw a big crowd of people still watching from a distance—the men leaning back against their car hoods, taking it all in, and the women watching over sleeping children in their laps.

"Wherever you go, these people are friendly and curious," said J. L. Munger, Brazos production foreman.

Munger and H. (Doc) Cherry, Brazos drilling foreman, have made many friends in the area. Along with Maurice Lewis, Jr., Brazos field superintendent, they already are about as well known as the parish priest. Everytime the Brazos men walk into a general store or a restaurant, the Karnes County people flock around to see how things are going and to wish them luck.

County commissioners and other officials have offered their services. Already, roads are being improved in the area of the discovery well.

"We could use a four-lane highway out here with all this traffic," Munger laughs.

Munger and Cherry, the first two field men hired by Brazos after it was organized, are optimistic over Brazos' possibilities of developing good oil play in the area—which will benefit both Brazos and the area.

"And the cooperation and friendliness of the people here has been a real help," Munger said.

"Doc and I have been in the oil business a long time," he said, "and, we know there's nothing in the world like knowing that the people are behind you and pulling for you."

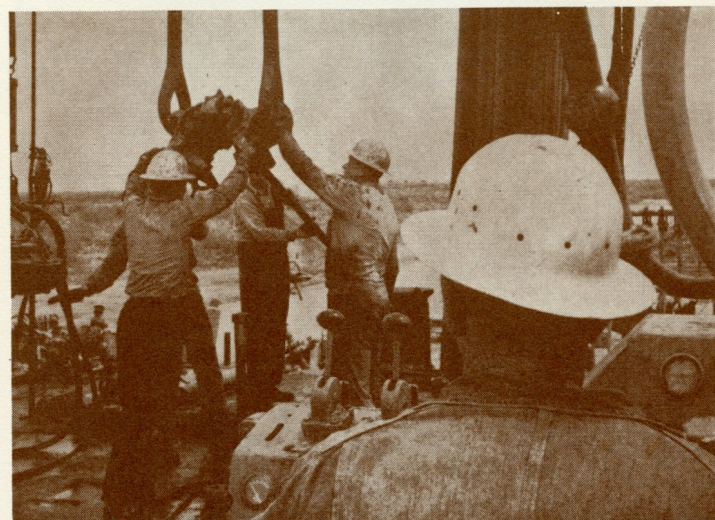
Dow first established Brazos Oil and Gas Company as a wholly-owned subsidiary in 1946. Brazos became a Dow division in 1955. Dr. A. P. Beutel served as president of the subsidiary and also has directed Brazos activities since it was set up as a division.

R. A. Beutel is general manager of Brazos. He first joined Brazos in 1949, and has served the division as district geologist in Michigan, Texas, and Louisiana. He was named general manager in October, 1958.

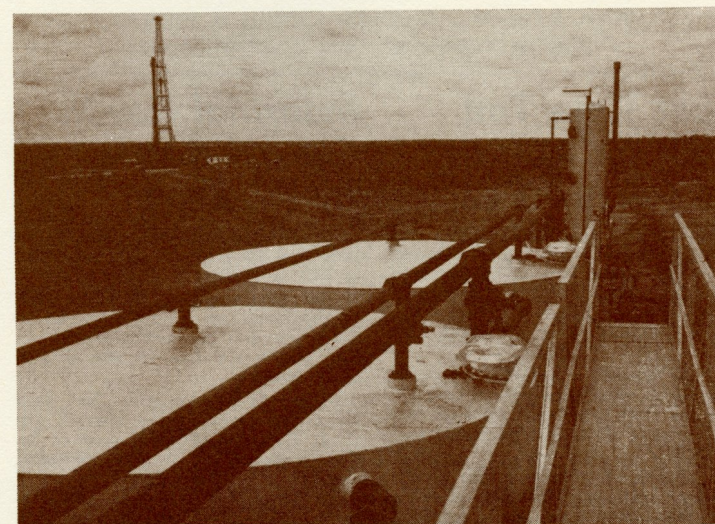
G. P. Huston, chief petroleum engineer, is in charge of Brazos production operations in the field. M. A. Reagan, Jr., Brazos geologist, heads geological operations in the Karnes County explorations.



BRAZOS' L. J. MUNGER, LEFT, AND H. (DOC) CHERRY
Five-inch shape charge jet gun for perforating goes in well.



DRILLING CREW INCLUDES SEVERAL KARNES COUNTY RESIDENTS
George Pruitt, day driller, operates all controls at console, right.



STORAGE TANKS, HEATER TREATER READY TO SERVE NEW WELL
These facilities can be enlarged to handle additional wells.

The Dow Texan

THE DOW CHEMICAL COMPANY TEXAS DIVISION FREEPORT TEXAS

BILL COFFEY

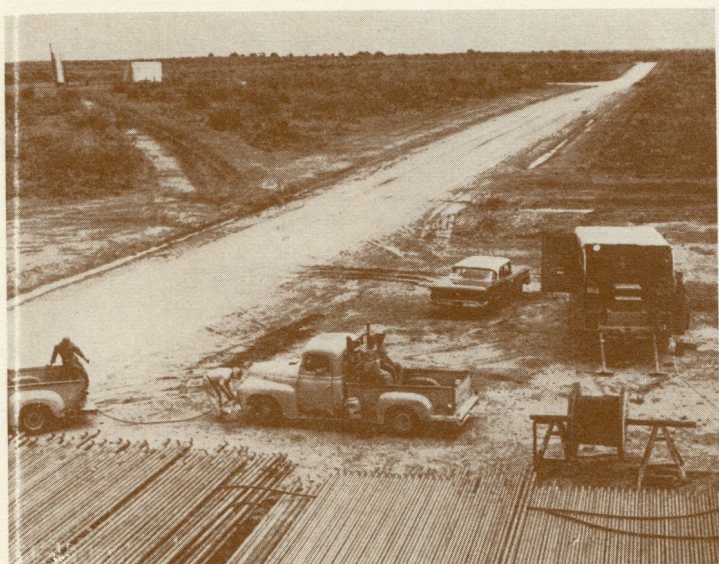
Supervisor of Publications

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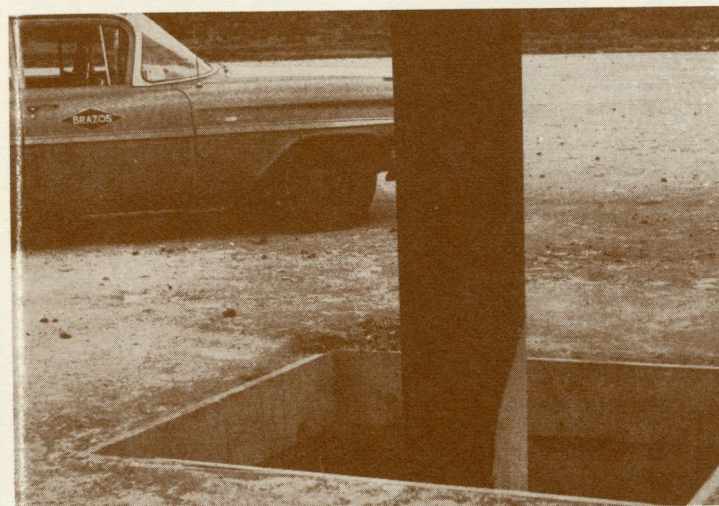
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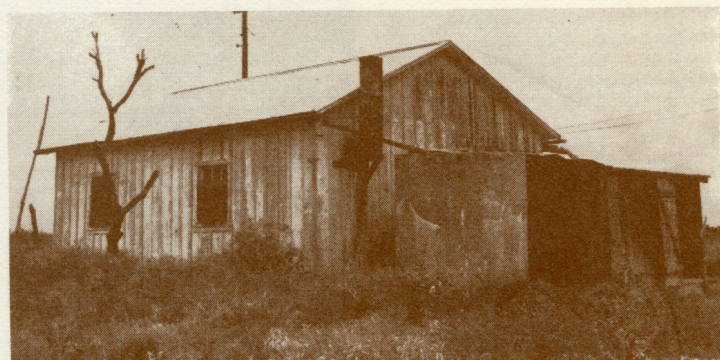
VIEW FROM DRILLING PLATFORM SHOWS ROAD TO NO. 2 PERSON
Treating, storage, loading facilities at upper left.



BRAZOS NO. 2 PERSON TO SPUD IN THIS WEEK
Conductor casing is installed in concrete to 40-foot depth.



CESTOCHOWA CATHOLIC CHURCH IN KARNES COUNTY
This beautiful structure is typical of churches in area.



DESERTED FARM HOUSE IN VICINITY OF BRAZOS OPERATIONS
Note the unusual chimney and the old cistern.



STAKE IN OLD CORN FIELD MARKS BRAZOS NO. 1 G. AND T. YANTA
Drilling bids are out for project about two miles from first well.



CATHOLIC CHURCH AT TINY VILLAGE OF PANNA MARIA
First Polish settlement in Texas came here December 24, 1854.

Inventors Are Issued 10 Patents

Patents issued recently to Texas Division inventors have been announced by the Patent Office.

Polyepichlorohydrin Bis (2,3-carbonato-propyl Ether) No. 2,891,073, issued June 16, to Robert M. Smith, formerly with the Organic Product Development Laboratory and now a professor at Odessa Junior College.

3,3-Dichloro-2-Methylallylamines, No. 2,891,064, issued June 16 to Donald G. Kundiger, Dow consultant, and Dr. Huey Pledger Jr., Organic Process Development Laboratory.

Preparation of Ethylene Urea, No. 2,892,843, issued June 30 to Dr. Leonard Levine, Organic Product Development Laboratory.

Preparation of 1,4-Oxathiane, No. 2,894,956, issued July 14 to the late James M. Whisenhunt of Organic Process Development Laboratory who was killed in a car wreck December 21, 1956.

Permeaselective Membranes, No. 2,894,289, issued July 14 to Billy G. Harper and John H. Brown Jr., both of Organic Basic Research Laboratory, and John C. Moore, Organic Research.

Determination of Conductivity of Liquids, No. 2,895,102, issued July 14 to Porter Hart and Hugh C. Behrens, Instrument Technical Services.

Improved Method for the Preparation of Polyurethanes, No. 2,894,935, issued July 14 to W. F. Tousignant of Midland and Dr. Pledger, Organic Process.

Treatment of Solutions Comprising Similarly Charged Monovalent and Polyvalent Ions to Concentrate the Polyvalent Ions, No. 2,897,051, issued July 28 to W. F. McIlhenny, James A. Clarke, and Albert B. Baker, all of Chemical Engineering, and Dr. W. C. Bauman, Midland.

Preparation of Alkali Metal Isethionates, No. 2,899,461, issued August 11 to Robert M. Smith, formerly with Organic Product Development Laboratory.

Recovery of Ammonia and Hydrogen Cyanide from Gaseous Mixtures, No. 2,899,274, issued August 11 to Raymond A. Smith, Central Laboratory, and H. H. McClure and George C. Bond, both of Organic Process Development Laboratory.

Transfers Listed In Fibers Group

The transfer of Alfred Greenfield, product manager for Zefran acrylic fiber, from New York to Textile Fibers Department headquarters at Williamsburg, Virginia, has been announced by Amos Ruddock, department sales manager.

Simultaneously, the appointment of James Jones to the position of product manager for Rovana, Dow's new saran micro-tape, was announced. Jones, who has been with Dow for 10 years, formerly served as field sales manager for Zefran and as special assistant to the department manager at Williamsburg.

Inez Hall Loves Her Safety Shoes



INEZ HALL FINDS SAFETY SHOES COMFORTABLE
She wears them on the job at the Records Center.

Suede Loafers Are Comfortable, Offer Protection

Every woman loves a new pair of shoes, and Inez Hall is no exception. The difference is that her shoes are safety shoes.

Mrs. Hall, file clerk in the Texas Division Records Center, has a new pair of black suede loafers she wears on the job. She usually wears high heel shoes to the plant, changes to her safety shoes for work, then changes back to her dress shoes before leaving at the end of the day.

"This way I'll have my safety shoes here all the time and still have high heels in case I'm going somewhere after work," she said.

Her loafers have the steel toe, a built-up arch, composition sole, and cost only \$7.75.

Mrs. Hall, who has handled as many as 1,800 requests for materials in one month, says that the safety shoes are the most comfortable things she has found for working on concrete floors.

The safety toe offers her protection in case a heavy package of records is dropped or a records cart is pulled accidentally against her foot. The job also required use of a platform ladder because some rows of files are eight drawers high.

While Mrs. Hall doesn't face any more safety hazards on her job than other women employees, she said that she believes she would wear her new safety shoes on any assignment because they not only are safe, but comfortable.

Several different styles of women's safety shoes—including loafers, saddle oxfords, the black suede loafer, and a blucher moccasin with Cuban heel—are available. They cost no more than ordinary shoes and may be purchased on payroll deduction through the Stork Department. They are sold at A-701 from 7:30-10:30 a.m. and at B-361 from 12:30-3:30 p.m.

BRAZOS

(Continued from page 1)

cilities have been erected to serve wells in the immediate area.

Bids also are out for drilling the Brazos Oil and Gas No. 1 G. and T. Yanta on another Brazos lease about two miles from the Person well.

Shell Oil holds offsetting acreage to the Brazos No. 1. Person and it is reported that drilling soon will be started on one strip of Shell leases.

The Brazos No. 1 Person is 20 miles northeast of deep Edwards production and away from any oil production.

Earlier projects some years ago in the vicinity by Shell and other companies were abandoned at 5,000-6,000 feet. However, since the Lone Star Production Company deep Edwards discovery in neighboring Atascosa County several years ago, it was generally believed that the trend one day would be for potential discoveries in northeast Karnes County. However, nothing was done about it until Brazos went into action on mineral leases originally obtained several years ago for uranium possibilities.

Medical Research Center Established By Dow Corning

Founding of the Dow Corning Center for aid to Medical Research at Midland has been announced by Dow Corning Corporation.

Purpose of the center, according to Dow Corning President W. R. Collings, will be to aid medical research by supplying technical assistance by acting as a clearing house for information about the use of silicones in medicine and surgery, and by cooperating in research in organosilicon chemistry in relation to the human body.

Director will be Dr. Rob Roy McGregor, one of the first inventors of commercial uses of silicones. Formerly a Fellow of the Mellon Institute, Pittsburgh, Dr. McGregor has been a member of Dow Corning's research team since the company's founding in 1943. He is now assistant director of research.

Silas A. Braley, once an associate of Dr. McGregor's at the Mellon Institute, will be executive secretary of the foundation. Braley has been a Dow Corning employee since 1951, most recently as a supervisor in the Product Engineering Silastic Laboratory.

Deadline Nears On Papers for Midland Meeting

The Dow-Dow Corning Fall Scientific Meeting will be held November 7 at Midland.

Papers now are being accepted for screening, and the deadline for receiving papers is September 10. The meeting is closed, so no Central Research Index approval is required. However, prospective authors should get approval of their department heads.

An abstract in duplicate of about 50 words is needed for the printed program. Authors should submit a research report covering the subject matter, the full manuscript, or a 500-word condensation—all in duplicate.

The information should be sent to Dr. C. W. Roberts, Polymer Research Laboratory, 644 building, Midland.

Authors will be informed before October 1 whether their papers have been accepted.

Recreation

PLANT DUPLICATE BRIDGE DOW SERIES—CURRENT STANDINGS

NAME	AV. PCT.
Tom Frizzell	57.45
W. A. Randle	54.89
John Moore	53.98
Hazel Frizzell	53.44
Bonnie Woods	53.43
Carleen Beard	52.96
Jim Newman	52.58
Don Beard	52.46
Lee Johnson	52.24
Ann Hillyer	52.03
Larry Cochran	51.94
H. B. Simpson	50.73
A. A. Johnson	50.51
W. H. Hillyer	49.68
Millie Sandel	49.48
Vivian Havers	48.23
Joe Allen	48.16
Gordon Helton	47.37
Eriel Newman	45.58
Thelma Spiller	45.49
L. D. Deere	44.73
Mrs. W. A. Randle	43.70

BOWLING NOTICE

All teams and/or persons interested in the plant bowling activity should contact the Recreation Department, ext. 3-3189 for information with regard to existing and new leagues, lessons for beginners along with team and/or individual placement. Effective this season, bowling facilities will be open 24 hours a day and a rotating league is planned.

FINALS POSTPONED

The teams of Divot Diggers, Turf Glazers, Mavericks, and Magnesium are seeking championship and consolation honors, respectively, in the current plant team tournament. The schedule deadline, due to inclement weather, has been extended from August 23 to September 7. Pairings are as follows:

CHAMPIONSHIP

DIVOT DIGGERS	VS	TURF GLAZERS
Jack Chappell	vs	Alvie Smith
Kelly Phillips	vs	George Hailey
Dick Preston	vs	C. M. Wilson
Lloyd Schroeder	vs	John Bird
Bob LaFleur	vs	Eldon Embrey

CONSOLATION

MAVERICKS	VS	MAGNESIUM
Roy Hammonds	vs	Jesse Cantu
Milton Robinson	vs	F. M. Johnson
Bob Turner	vs	Richard Crandal
E. Edgar	vs	Rex Cooper
Wayne Presley	vs	G. J. Alka

GOLF CLUB TOURNAMENT

Entries are now being accepted for the annual Freeport Golf Club Match Play tournament scheduled to start September 14.

1. Tourney open to all adult golfers residing or working in the Brazosport Area.
2. \$3.00 entry fee.
3. 18 holes to qualify.
4. Qualifying through September 13.
5. First round September 14 through September 20.
6. Second round September 21 through September 27.
7. Third round September 28 through October 4.
8. Number of players in each flight to be determined by number of entries.
9. Three prizes per flight (trophy and merchandise):
 - a. Winner
 - b. Runner-up
 - c. Consolation
10. Persons competing for medalist honors must qualify on Saturday, September 12. Prize to be given to medalist on qualifying round.
11. Players having participated in Plant Golf activities, if unable to qualify, may enter tourney with existing average.

CHESS CLUB NOTICE

A chess club ladder tournament to determine the status of players is being organized. All chess players interested in improving their game or learning the game are invited to come out and join the fun. The next club meeting is September 2, 7:00 p.m., in the B-102 Building.

TDI

(Continued from page 1)

Clure, Organic Process Development Laboratory, is vice-chairman and G. R. Kelly, Accounting, is serving as secretary-treasurer.

Other members of the TDI executive committee are S. C. Cutshall, P. E. Muehlberg, J. L. Tod, and R. E. Treichler.

TDI membership is open to technical, professional, and supervisory employees of Dow and Ethyl-Dow. Dues are \$2 per year.



DOAN VISITS Dr. Leland I. Doan, Dow president, met with Texas Division executives, including the Executive and Operating Boards, during a brief visit here last week. Dr. Doan is pictured at center. At his left is Dr. A. P. Beutel. Dr. Doan also was speaker at the University of Houston summer commencement last Thursday.

Dow Employee Finds

Russia Land of Extreme Contrasts

Can the Soviet Union make good its boast that by 1965 it will surpass the United States in per capita production? L. H. (Barney) Rowe, head of Midland Division Salary Administration, recently returned from a week behind the Iron Curtain with an answer to that question—a qualified no.

"You've got to take into account the

total control of the Soviet economy," Rowe said, explaining his qualification. "They can surpass us in a given area."

Rowe, who made the trip as part of a group of businessmen from the Saginaw Valley (the area in which Midland is located) to study European business and industry, emphasized that his three-week tour of the Soviet Union

and seven other European countries was too brief to support absolute conclusions. However, most of his impressions tend to support many popular beliefs about the Soviet Union, while a few run counter to popular beliefs.

Some of his impressions are these:

—The idea that most Russians would jump at a chance to revolt against Soviet dictatorship isn't necessarily so. "These people are not unhappy," Rowe says. "In the last 30 years they have made a continuous rise in their standard of living. They live on promises." He also said that while their stand of living is low, it is good by comparison to pre-revolution days.

—The Russian people almost without exception were friendly, helpful and courteous.

—Russian industry apparently doesn't worry much about safety aspects. "I didn't see a pair of safety shoes, I didn't see a pair of goggles, I didn't see a hard hat in all of the factories," he recalled.

—There's not a job of manual labor in the Soviet Union which women apparently don't do. In a Leningrad plant he visited which produces heavy steam turbines and compressors, 75 per cent of the employees were women.

Rowe summed up his impressions of Russia by calling it a country of extreme contrasts.

"In Moscow you find lots of window dressing, wide streets, and ornate buildings," he said. "But you also find miles of high board fences that hide the squalor of narrow alleyways and log-cabin homes. The Metro or subway has stations which are real show places of mosaic art, but the workmanship in other construction is very poor. Millions of apartments are being built, but they allow an average of only 100 square feet per person, one 10 x 10 room. They built the first Sputnik but they produce less than 100,000 cars a year."



G. R. KELLY, STANDING, SELLS TDI MEMBERSHIP TO H. H. McCLURE
Kelly is secretary-treasurer, McClure vice-chairman of TDI.

Two Graduate Courses Set For Fall Term

Two graduate courses and one undergraduate course have been scheduled for the autumn term of the Texas A. & M. College extension program for Texas Division employees.

The graduate courses are chemical engineering thermodynamics and advanced quantitative analysis. The undergraduate course is physical chemistry.

Other undergraduate courses also will be taught if requested by 20 or more employees. Courses being considered include general chemistry, algebra, trigonometry, calculus, beginning German, technical writing, engineering drawing, and advanced mathematics. Requests for these courses should include name and plant address and should be mailed to J. P. Middleton, B-101.

Courses are open to all employees of Dow and Ethyl-Dow. Registration forms and instructions may be secured from Personnel or Technical Employment Departments by calling extensions 3-3822 or 3-3588. Registrations should be completed before September 15. Late registrations will, however, be accepted at the first class meeting.

All classes will be held on Thursday evenings from 6:30 p.m. to 9:30 p.m., except the physical chemistry lab, which will meet on Tuesday. The autumn semester will begin Thursday, September 24, and will end January 28. Registrants will be notified as to the meeting places for classes. Books will be available for purchase at the first class meeting.

The title of the graduate chemical engineering course is Ch.E. 623, Applications of Thermodynamics to Chemical Engineering. It is a three credit-hour course and will be taught by Dr. C. D. Holland of Texas A. & M. College. Dr. Holland has previously taught four chemical engineering courses in the graduate program.

The graduate chemistry course is Chemistry 620, Principles of Quantitative Analysis. It is a three credit-hour course and will be taught by Dr. R. H. Whealy. Dr. Whealy, formerly of West Texas State College, is head of the Analytical Section of the Chemistry Department at A. & M.

Tuition for graduate courses is \$42. Physical Chemistry 323 is a four credit-hour course. The laboratory instructor will be Dr. B. E. Bryant of the Texas Division Chemical Engineering Department. The course instructor has not been selected. All undergraduate courses are \$12.50 per semester-hour, plus \$10.00 for laboratory fees.

The fall term will be the beginning of the fifth year of the A. & M. extension program. There has been a total of 1,424 registrations in 67 courses.

Italian Assignment

Roger R. Zoccolillo, a product manager for Organic Chemical Intermediates Sales, has been transferred to Dow Chemical International Limited S. A. for a two-year assignment as project sales manager in the Italian area.

Zoccolillo came to Dow in 1953 from the Army Chemical Center in Edgewood, Maryland. He had served with the Army Chemical Corps for two years.



FIRE DEPARTMENT REPRESENTATIVES IN GENERAL MANAGER'S OFFICE
L-R: H. C. Baxter, C. J. Vitek, W. F. English, N. F. Link, O. H. Mays, Dr. A. P. Beutel.

Fire Fighters Praised for Efforts

Members of the Texas Division Fire Department and auxiliary firemen were congratulated last week for their efforts in extinguishing a hazardous fire in a hydrocarbon storage tank at Plant B.

"The Texas Division is sincerely proud of the job you did," Dr. A. P. Beutel told Fire Department repre-

sentatives in a meeting at his office the day after the blaze. Many of the 55 men who had fought the blaze were off duty and missed out on receiving Dr. Beutel's personal congratulations.

The hydrocarbon material caught fire when lightning struck during a rain storm. But, the fire was brought under control in 28 minutes, according to

N. F. Link, Fire Department superintendent, and extinguished in 40 minutes.

Personnel in B-105, B-205, and B-108 were evacuated from the area as firemen battled the flames.

Two other fire alarms were answered at Plant B during the same rain storm. These fires, also started by lightning, were extinguished quickly.

People in the Spotlight

Civic Assignments Listed

N. D. Griswold, Executive, was a member of the Brazosport Chamber of Commerce committee which recently selected a new manager for the organization. The new manager is Ernest R. Larmer, who comes to Brazosport from Colorado City, Texas.

Jay Grisham, Purchasing, has been elected president of the new El Lago Country Club, formerly Meadowlake Country Club. Ed Hearn, Tank Car, has been elected treasurer. R. L. Carlyle, Organic Product Development Laboratory, and B. M. Hall, Electric Shop A, are members of the board of directors.

Homer N. Beakley, Accounting, served as master of ceremonies recently at the Freeport Lions Club Carnival Prince and Princess Contest.

Harry W. Mohlmann, Production Control, has been elected president for 1960 of the Men of the Church at the Lake Jackson Presbyterian Church. He succeeds G. P. Whittington, Industrial Relations.

Other 1960 officers include Charles F. Goff, Motor Transportation, vice-president; Dr. Huey Pledger Jr., Or-

ganic Process Development Laboratory, secretary, and Roger Gohrband, Economic Evaluation, treasurer.

G. M. Sanders Jr., has returned to Motor Transportation after completing a tour of military service.

P. G. Gurklis, Maintenance and Construction, will be a member of the Petrochemical Maintenance panel at the 14th annual Petroleum Mechanical Engineering Conference September 20-23 at the Rice Hotel in Houston. Gurklis will discuss Area Maintenance Versus Centralized Maintenance.

Plant Site Option Taken in Canada

Dow Chemical of Canada, Limited, has taken an option on property in the Vancouver, B.C., area as a possible site for a phenol plant.

Soil tests now are being made. If these tests prove suitable, the property will be purchased for the plant. Engineering for the unit is nearing completion.

The Dow subsidiary announced plans last January to locate a phenol plant in Western Canada.

Stanton Gets Western Post

The transfer of Dr. G. W. (Bill) Stanton, head of research for Dow's Textile Fibers Department, to the position of assistant to the director of Dow's Western Division Research Department has been announced by Dr. R. H. Boundy, Dow director of research and vice-president.

Stanton will move into a position of wider responsibility in Dow's research organization, Dr. Boundy said. His immediate assignment as assistant to R. G. Heitz, Western Division director of research, will be on divisional research projects, but the broader scope of his new position will bear on long range research planning of interest to Dow.

Dr. Stanton, who has been the leading figure in research resulting in the development of Zefran, Dow's synthetic fiber, will now move into the area of research project analysis. He will make studies of methods which may be useful in selecting research projects for both short and long range company efforts.

He will also perform a service to research personnel who would like to have projects analyzed or compared to existing methods. The long-range aspects of his new position will be coordinated with similar work in process by Dr. Boundy's executive research staff.

❧ 1960 ❧

Brazos was assigned the responsibility for operating the Texas Division Pipeline System. This included the fuel gas, LPG and ethylene line, together with the operation and maintenance of storage facilities at Stratton Ridge and the lines between Plant A and Plant B.

During the year a 51-mile, six-inch LPG pipeline was constructed from the Shell Refinery near Sheridan to Brazos' existing LPG system.

Drilling in Sacramento County, Calif., accounted for half of this year's wells. Continued development in the Person Field included five of the eight wells drilled in Texas. One discovery was made in Louisiana and one in Texas.

❧ 1961 ❧

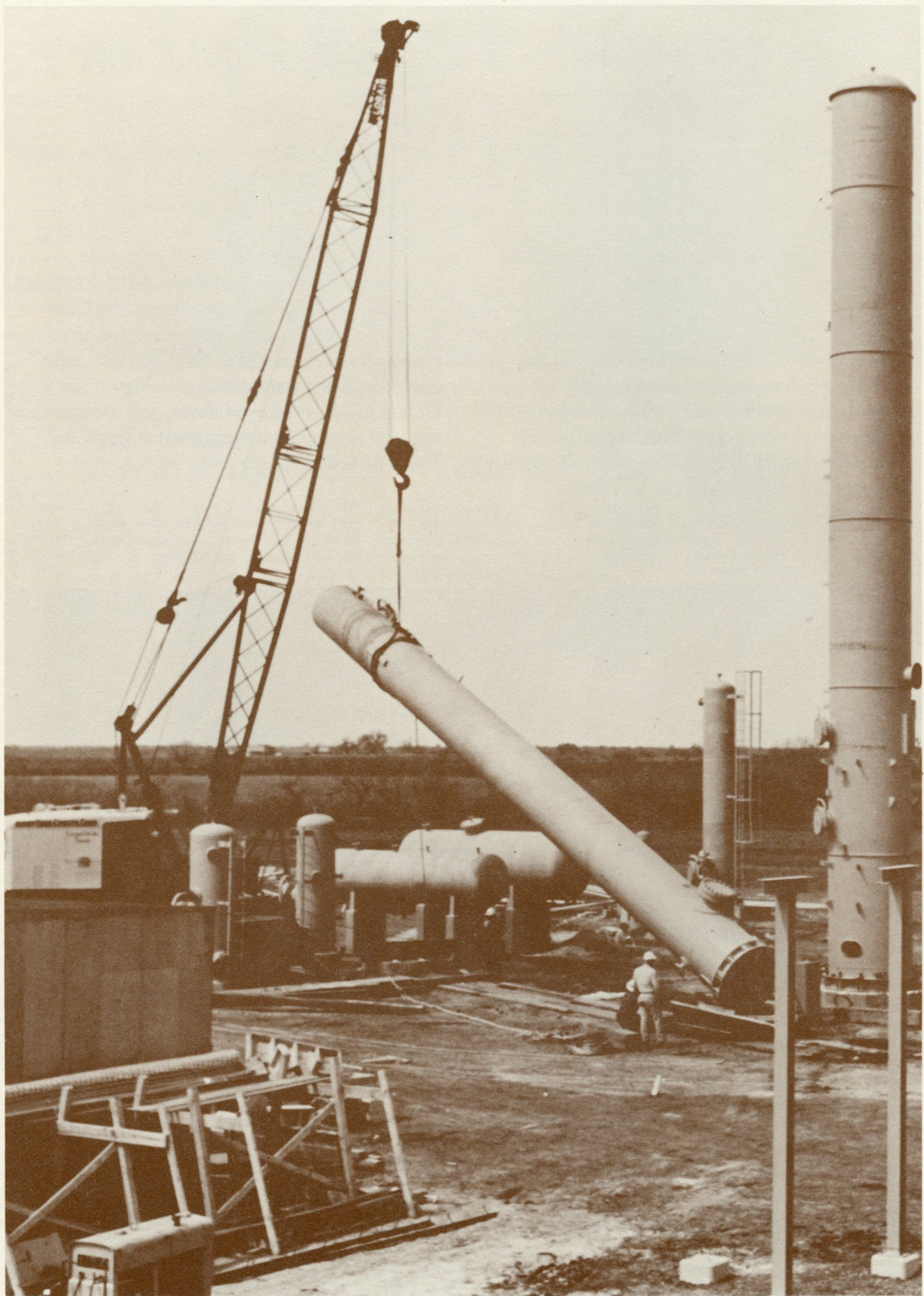
In January, the Brazos Division moved its offices from the City National Bank Building to the newly-built Dow Center on Richmond Ave.

A sulphur recovery plant was constructed at the Person Field with Shell Oil Company designated as operator and Brazos as a part owner.

The Blair-Vreeland properties in the Clip Field, Goliad County, Texas were purchased, pipelines were installed to the Clip Field, new twelve inch and sixteen inch crossings of the Colorado River were put down, and construction of a new roustabout headquarters at Bay City, Texas was completed.



Sulphur Recovery Plant



Person Field Gas Plant

IN PRODUCTION

Tom Brown Took the Right Road

T. E. (Tom) Brown, general superintendent of Chlor-Nitrogen Products, is a research chemist who decided long ago that he liked production better.

The decision was a wise one. Brown, former general superintendent of Chlorinated Methane Products, two weeks ago was given responsibilities which add up to a large percentage of the Texas Division's organic production. He reports directly to General Manager Earle Barnes.

In addition to Chlorinated Methane Products, Brown now has under his supervision all plants and activities formerly under Robert H. Smith, who transferred to Dow International at Midland.

Plants Listed

These include: Vinyl-Vinylidene Chloride, Ethylene Diamine, and Perchloroethylene. Brown already had under his supervision Versene and Epoxy Resin.

A relaxed man with a keen, analytical mind, Brown joined Dow at the Western Division in 1939 as a research chemist. He grew up at Antioch, California, a few miles from the Western Division, and was graduated from the University of California at Berkeley in 1939 with a B.S. degree in chemistry.

Brown did a lot of research work on hydrogen chloride absorption, an important part of the process used in the production of carbon tetrachloride. The Western Division was making plans to build a Carbon Tet Plant in those days, and the results of Brown's research went into the building of that plant.

Transfers to Texas

At the same time, the newly-started Texas Division was preparing to go into production of carbon tetrachloride. To help solve the problems, Dow transferred Brown to Freeport as assistant superintendent of the Texas Division's Carbon Tet Plant in August, 1942. He has been a production man ever since.

Brown is certain that he has been much happier producing chemicals than he would have been had he continued in the research field.

"You can see the results of what you do almost immediately in production," he explains. "In research, it can take years before you can see the real results of your work."

Becomes Superintendent

In June, 1943, Brown was given responsibility for hexachloroethane production, and in December, 1944, he was promoted to superintendent of the Carbon Tetrachloride Plant. Methylene Chloride was added to his responsibilities in 1947.

Brown was promoted to general su-

See BROWN, Page 2



BRAZOS COMPLETES PURCHASE OF LEASES

Brazos Oil and Gas purchased four shut-in gas wells in the Clip Field Tuesday. From left to right, principals in the transaction were, George Nye, senior vice president, First City National Bank; John Vreeland and Bob Blair, Corpus Christi partners who sold the properties; Guy Nevill, Brazos Oil and Gas; W. S. Elkins, First City National Bank attorney, and M. A. Regan, Jr., Brazos Oil and Gas.

Brazos Purchases Clip Field Wells

Dow's Brazos Oil and Gas Company division today announced the purchase of properties consisting of four leases in Goliad County on which are situated four, dually-completed shut-in gas wells.

Purchased from Blair-Vreeland, a Corpus Christi partnership, the leases are part of the Clip Field, and cover approximately 1,100 acres. The transaction was completed August 1.

Brazos plans to begin production from these wells as soon as a pipeline connection is completed. The wells, which were completed through two sands, have been shut-in for approximately 18 months.

It is expected the pipeline work will be completed by September 1, 1961. The gas will then move from Clip Field to Dow's Texas Division by way of the Houston Pipe Line Company.

G. L. Nevill and R. E. Jones, attorneys for Brazos, handled the legal aspects of the purchase and the Vinson-

Elkins law firm of Houston arranged financing details through the First City National Bank of Houston. The purchase was made under the ABC method of financing.

Dow Increases Stock Dividend To 40 Cents

Dow's Board of Directors Tuesday declared a dividend of 40 cents per share on its common stock payable October 14, 1961 to stockholders of record at the close of business on September 15, 1961.

Dow increased its dividends to 40 cents per share from 35 cents which has been paid quarterly since January, 1960. At that time, the quarterly dividend was increased to 35 cents from 30 cents which had been paid since July, 1956.

The board of directors also announced Tuesday that it is not its intention to pay a stock dividend this fall. A two per cent stock dividend has been declared in 5 of the past 7 years.

LOST TIME STORY

One Second Costs 1,441 Man Hours

On June 10, 1960, a disabling injury occurred in the Texas Division.

It took one second for the accident to happen.

From that moment the term "lost time" became an identifying label, and the incident closed for many division employees.

But for some, that one second opened a new chapter, and before it was finished, 1,441 man hours were used up in connection with the injury.

These facts were presented at a recent Accident Prevention Committee meeting after a study of the injury was made by the Safety Department.

The study was requested by the committee in an effort to establish a true picture of what "lost time" really involves in an accident.

To show this picture, the Safety Department presented a step time table on the injury. It went like this:

- The injury: One second.
- Immediate time expended by others: 43 hours.
- Safety and Medical: 136 hours.
- Supervision and co-workers: 22 hours.
- Transportation, welfare, and insurance: 56 hours.
- Accident Prevention Committee report and distribution: 43 hours.
- Equipment design, revision, and committee work: 56 hours.
- Time lost and therapy for the injured: 488 hours.
- Discussion in safety meetings: 597 hours.

The injury that was studied is considered to be an average-type. All of the nine steps in the time table generally apply in a lost time accident.

The two main points stressed after the presentation were:

—When a lost time injury occurs, only one-third of the total time lost is actually charged to the injured; the remaining two-thirds is spent by others in investigation, follow-up, correction, discussion, treatment . . . And,

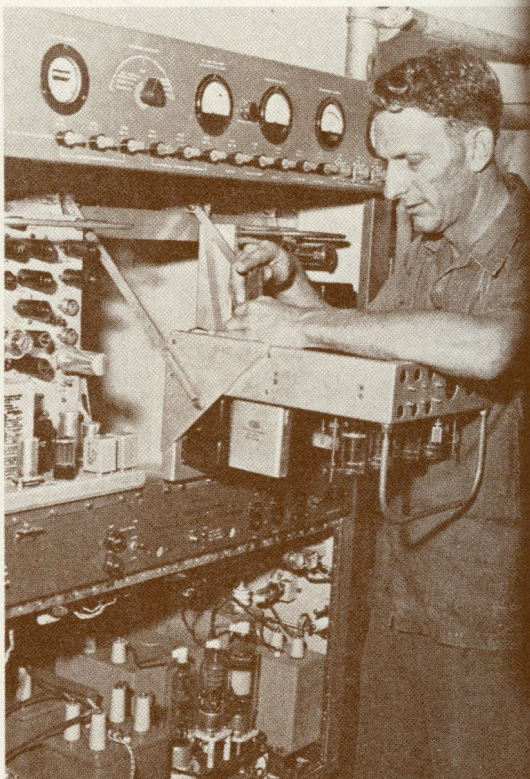
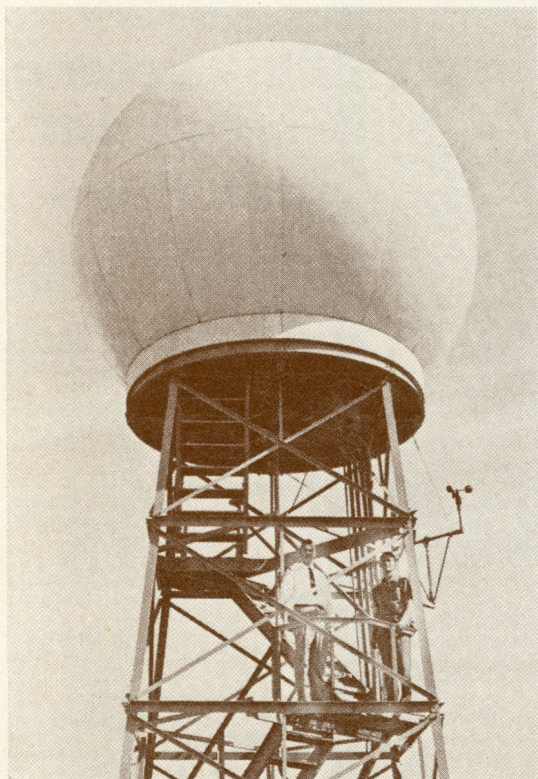
—It takes over 5,000,000 seconds to correct something that was done in one.

Two Lost Timers

Two lost time injuries were recorded last week, bringing to 14 the number reported in the Texas Division this year.

O. E. Waller, Motor Transportation B, received an injury to the lower back July 24.

C. B. Ruhmann, Brine Production, received a neck injury July 15 when a car struck the rear of a Dow pickup truck he was driving on U.S. Highway 288 near Plant B. Ruhmann began losing time July 26.



WEATHER BUREAU RADAR AT GALVESTON TO COVER BRAZOSPORT AREA

Photo at left shows J. G. Taylor and M. I. Rudd, meteorologists, beneath radar dome atop post office building. At right, Rudd makes some adjustments on radar modulator.

WITH WEATHER BUREAU

Dow Prepares for Hurricanes

The Texas Division can't head off hurricanes aiming for the Gulf Coast, but in cooperation with the U.S. Weather Bureau, it can and does take precautions to prevent injury to its employees and damage to its property.

If an improved radar installation of the Weather Bureau gives sufficient information soon enough, the division after this season may discontinue operation of its weather radar and other equipment, General Manager Earle Barnes announced Tuesday. A decision will be made on the basis of experience with the government operating improved hurricane-information facilities this year.

"We would probably be justified in making this change right now," Barnes said, "but we believe we should try it for one hurricane season to be positive."

Service this year will be better as result of a new weather radar system expected to go into operation at Galveston in June, E. A. Farrell meteorologist in charge of the Weather Bureau at Houston, said.

Farrell said the WSR-57 radar station at Galveston was designed especially for hurricane detection.

"It, along with all other radar equipped Weather Bureau stations along the Gulf Coast, will be manned by government-trained operators 24 hours a day, 365 days a year," Farrell added.

300-Mile Range

The radar station at Galveston, like Dow's, can reach 300 miles into the Gulf and pick up any severe weather.

Farrell said it is part of a current Department of Commerce program to modify and improve its weather protection.

"This program has been going on for several years, ever since weather radar

units were first installed on the Gulf Coast," he explained.

Dow's weather radar unit was installed in 1948.

For several weeks Industrial Security, the department responsible for preparing for the worst in case a hurricane strikes on the Texas Gulf Coast, has been double checking and updating its plans. Hurricane season on the Gulf Coast is June 15 through October 31.

Through the Weather Bureau at Houston, Industrial Security receives information from a string of radar equipped weather stations stretching from Brownsville to Miami, Florida.

Information Explained

In its day-to-day operations, Industrial Security exchanges information with the Weather Bureau at Houston via a closed circuit teletype service.

The Weather Bureau also provides the division with daily forecasts, which are tape recorded for play on Industrial Security's magnecorder. Any employee can receive these forecasts via tele-

See STORM, Page 2

Brazos Hits 2nd Major Discovery

Dow's Brazos Oil and Gas Company Division today announced its second major discovery within the last two months.

Latest well for the Houston-based company is a wildcat gas-distillate in the extreme eastern part of Colorado County, Texas, near the Eagle Lake area.

The well is located approximately 90 miles northwest of the Texas Division at Freeport and 17 miles north of the Brazos gas pipeline terminal at Lakeview Field near El Campo.

In Louisiana First

A discovery in Louisiana was announced by Brazos in April. Hit on the company's first drilling in the Pointe Coupee parish, the Louisiana well tested 129 barrels of 43 gravity pipe line oil per day.

The Colorado County well was drilled as Brazos Oil and Gas Company, Well

No. 1. G. H. Matthews et al., on a 100-acre tract, which centers in a 100 per cent lease block in excess of 3,000 acres. After the evaluation of extensive geological sub-surface mapping and seismic surveys, the test hole was drilled to a total depth of 12,005 feet in order to explore the sands in the middle Wilcox formation. Seven-inch casing was run to a depth of 10,447 feet and an overall producing section was perforated from 9,620 feet to 9,714 feet.

On a production test, the well has produced at a daily rate of 2,400,000 cubic feet of gas and 30 barrels of 48 API gravity condensate.

This significant discovery is more than two miles from any other oil or gas production, and is in an area where many oil companies have attempted and failed to discover and establish commercial production.

Opens New Field

Although final production testing is as yet incomplete, the well will definitely open a new gas-distillate field, and will soon be followed by further development in the area by Brazos.

Brazos employees directing operations at the well site are Paul Phillips and H. (Doc) Cherry, drilling foremen; and R. T. Foust, geologist.

Dow first established Brazos Oil and Gas Company as a wholly-owned subsidiary in 1946. Brazos became a Dow division in 1955. Dr. A. P. Beutel served as president of the subsidiary and has directed Brazos activities since it was set up as a division.

R. A. (Dick) Beutel is general manager of Brazos. He first joined the company in 1949, and has served the division as district geologist in Michigan, Texas, and Louisiana. He was named general manager in October, 1958.

Holiday May 30

The Texas Division will observe a regular holiday on Memorial Day, Tuesday, May 30.

The **DOW** *Texan*

THE DOW CHEMICAL COMPANY

TEXAS DIVISION • FREEPORT TEXAS

Vol. 19

December 13, 1961

No. 4



MAN AGAINST THE WOODS: LUMBERJACKS SLOSH THROUGH THE BAD AND THE BEAUTIFUL

The picture above was taken deep in the timber lands of southern Louisiana. The view is typical of the acreage in this region now being developed by the Brazos Oil and Gas Company of Houston. Brazos

not only is engaged in oil and gas explorations here, it also is interested in the rich timbering potential. For additional information, see story and pictures on pages 4 and 5.

Project Echo Slated As Feature at TDI

"Voices Across Time and Space" will be the subject at Thursday night's Texas Dow Institute meeting.

Speaker will be Jim Sage, science demonstrator for Southwestern Bell Telephone Company.

The dinner meeting will begin at 6:30 p.m. in the Plant B cafeteria.

In his talk, Sage will discuss Project Echo, an experiment conducted by Bell scientists, which involved bouncing voice signals off a balloon satellite in orbit, 1,000 miles above the earth. Sage will use miniature equipment to demonstrate how this was accomplished.



JIM SAGE

He will also demonstrate other techniques Bell Laboratories have developed to improve and increase telephone transmission over a few miles distance or around the world.

Among these is an electronic device that doubles the transmission capacity of the transoceanic telephone cables.

Sage will also explain the vast communications network that has been built to serve the North American Air Defense Command—the military nerve center for defense of North America against invasion.

Any Changes Of Address?

Have you had a change of address in the past six months?

If you have, you should fill out the form below so that the Texas Division will have a record of your correct mailing address.

It is important that you keep Dow informed of your mailing address so that you will receive notifications and communications linked to your job. For example, your earnings (withholding tax) statement will be mailed after the first of the year, and a correct address is necessary so that you receive U.S. Savings Bonds, check stubs, Pension and Profit Sharing Plan distribution statements, and other mail that Dow sends to employees.

The Payroll Department maintains the list of home addresses. If you have any question about your mailing address, contact Lena Lind at extension 3-2981.

In addition, he will include a demonstration on how microwave systems work to beam long distance calls and television programs across the country via the airways.

The audience also will be shown a model of a telephone of tomorrow which has pushbuttons instead of a dial.

7 Patents Are Issued In Division

Seven patents were issued recently to Texas Division inventors. They are:

—Dioxanes, No. 3,000,904, issued September 19, 1961 to Dr. D. G. Kunder, Dow consultant, and Dr. James H. Henner, formerly in the Organic Process Development Laboratory, now with James River Division.

—Inhibiting Thermal Degradation of Phosphoryl Tri-Dimethyl Amide, No. 3,002,586, issued October 3, 1961 to Dr. W. J. Rabourn Jr., Basic Research Laboratory.

—Method of Hydraulic Transmission of Power, No. 3,003,968, issued October 10, 1961 to John P. Bruce, Organic Product Development Laboratory; and J. R. Boudreaux, formerly with Organic Product Development Laboratory, now with Louisiana Division.

—Solid Composite Propellants Containing Polyalkylene Oxides, No. 3,004,840, issued October 17, 1961 to M. E. Pruitt, J. M. Baggett, and W. T. McMichael, all Organic Product Development Laboratory.

—Purifying Polymerized Olefine Prepared with Catalytic Metal Compounds and Compositions Thereby Obtained, No. 3,004,963, issued October 17, 1961 to F. A. Bartolomeo, formerly Organic Product Development Laboratory, now with Allyn's Point Division; Dr. H. D. Ledbetter, formerly Organic Product Development Laboratory, now with Western Division, and J. M. McDuff, Organic Product Development Laboratory.

—Preparation of Aluminum Hydroxy Fluoride, No. 3,006,724, issued October 31, 1961 to B. R. Harrell, Alkali Products.

—Preparation of Metallic Fluorides, No. 3,007,772, issued November 7, 1961 to F. Olstowski, Electrochemical Research.



DOWN THAT LONG, LONESOME ROAD
Timber is hauled from woods along this narrow opening



LOADING UP
Loggers snake timber aboard cat wagon

ADDRESS RECORD

Name _____
(Please print)

Mailing Address _____
(Street or Post Office)

_____ (City)

Department _____

Clock Number _____ Master No. _____

Clip and send to Payroll Department, B-1201

There's Beauty in the Bayous

Brazos Eyes Timber, Oil in Silent Swamps

Nature stands unrobed and almost alone in the magic velvet of southern Louisiana's bayou country.

This is the swamp land—where the marsh is cushioned by yielding leaves, and the water curls easily under trees of all ages.

This is where the wild goose flies, where the blackjack vines cling to mother oaks like insecure children, and the Spanish moss laces wistful whiskers on the fading old cypress hollows.

This is a land of which parts are startlingly beautiful, unmarred by man. There are berths tucked among the bayous and lakes that are so pure, so revealingly majestic, one feels a twinge of embarrassment for having intruded.

Atchafalaya Basin

This type country helps make up the southern basin of the Atchafalaya River. In this floodway, which is formed by a pair of levees about 20 miles apart, Brazos Oil and Gas owns approximately 40,000 acres. On to the north, west, and southeast of Baton Rouge, Brazos ownership lines continue to hold, wrapping around another 20,000 acres. In all, the Houston-based Dow division owns about 60,000 acres that are spliced into 653 separate tracts. They are scattered over eight parishes that reach 25 miles to the northwest of Baton Rouge and 50 to the southeast of Plaquemine.

Underneath, petroleum deposits dot the entire area. Primarily an oil and gas operation, Brazos' first aim is the development of these reserves. However, the company's interest also ranges above the ground within the tightly-spaced timberlands that stretch over much of the 60,000 acres.

Lumbering yields are still small compared to the income derived from petroleum, but Brazos' timber operation brought in over \$100,000 last year.

Brazos general manager R. A. (Dick) Beutel thought enough of the logging potential to engage a major lumbering firm in the spring of 1960 to handle his company's interests in this Louisiana area.

Cutting Rights

King Lumber Industries of St. Francisville holds all cutting rights to the Brazos timber. This means King guarantees Brazos a fixed amount for every 1,000 board feet of timber cut. The company can farm out some of the logging if it chooses, but its wood superintendent, Walter Snyder, says where, when, and how the independents will operate. Brazos land man Ken Ramey works with Snyder in handling this end of the business.

This insures Brazos a fair return on its timber and also keeps a consistent conservation practice in effect.

As Snyder puts it, "Cutting some—leaving some, is insurance for the future as far as forestry goes."

All of Brazos timber is cut to a 20-inch stump. This means no trees are touched that do not have at least a 20-inch diameter at their base. The kinds of trees that are lumbered in Brazos woods include cottonwood, oak, elm, hackberry, willow, ash and scattered cypress.

Productive Timber

The majority of the productive timber stands outside the basin. Many of

the trees inside the floodway have been injured by the continuing deposits of silt and sand. However, King does plan to cut any timber there that is worth milling.

Property lines are vague throughout the 653 tracts, but so far there has been no disagreement.

The man who probably knows Brazos' bayou country better than anyone else explains, "We have agreed on most of the lines by just sighting on the map. If ever any argument comes up, we can always run a survey."

This would be Percy Wisdom, a man wise to the ways of the swamp. At 58, he has spent his life along these bayous, lakes and levees.

Brazos Land Watcher

Percy has been the Brazos land watcher for five years—dating back to December of 1956 when Dow made its Louisiana purchase.

He lives on the levee at Bayou Sorrel. He has a 100-horsepower inboard, a small outboard, and a pickup—all of which he uses in his warden duties that carry over the vast acreage owned by Brazos.

Every day, Monday through Friday (and sometimes Saturday and Sunday) Percy is out going over his watch. It is his job to spot timber squatters, outlaw seismograph crews, and anything else that is out of place.

A constant companion of Percy's is his quart thermos of coffee. And you haven't really tasted the ultimate of the bean until you drink his coffee.

It's hot, black as midnight, and thick with sugar.

But it goes pretty solid on a crisp morning out on the bayous in his 17-foot cruiser.

An old logger himself, Percy is right at home with Snyder during cutting time on Brazos timber.

A Wet Year

This has been a wet year for the swamps; therefore, a poor cutting year.

When the rains hit, there is only one way to operate in the Louisiana woods, and that's on the tracks of cats (caterpillar tractors).

Negroes, using a winch that divides a cable into a pair of hooks, snake the logs on catwagons (trailers on tracks pulled by tractors) and the logs are moved to firm ground for hauling to the King mill by trucks.

In dry weather (last year they had seven months) the trucks go into the



TALKING IT OVER

L to R: Percy Wisdom, Ken Ramey, and Walter Snyder

woods and haul the timber out all the way.

But rain or shine, some logging must go on to keep the mill running. These are the times when the Paul Bunyon romance gets lost in that sticky, ever pressing Louisiana mud.

Such was the case late last month in the Bayou Bleu woods located in Iberville Parish.

In the Wallows

The actual cutting is not so rough, since it is done with a power saw. But it is still no place for the feather merchants, because trimming is done by hand axe and that chain saw gets heavy after a couple of cuts.

The snaking of the logs in the mud wallows is where the real day's work comes in. It's like wrestling alligators—but those humming loggers seldom miss a beat. In doing so, they work up quite an appetite—and no timbering operation is worth its salt without a cook shack.

King is no exception to this rule.

But if Percy did strange things with his coffee, a slender, bone-sucking Negro cook for King is downright weird in serving up his version of what able-bodied lumberjacks should eat.

One doesn't expect Howard Johnson out in the Bayou Bleu Woods, but any self-respecting tenderfoot would flinch a little when he goes through this chow-line.

The Cook Shack

A thin wisp of bluish smoke is the only thing which indicates to a visitor

that the cook shack is not a deserted old shed along the timber road. Inside, after your eyes finally adjust to the smoke, the grease, and the darkness, you find battered tin plates, forks sticking up out of a pint fruit jar, and a big sweating pot over an iron stove. Inside the pot there is grease, gravy, and chunks of meat. To the right, and below, is a smaller pot of rice. You scoop up a piece of meat, dip a little gravy over the rice, pass the coffee, and run for the outdoors.

The day's first shock comes when you find the food tastes pretty good—and you're going back for seconds that include cornbread and coffee.

Snyder, with tongue halfway in cheek, apologizes for the cook, explaining "our regular one got shanghaied for a deer camp."

Wildlife Plentiful

Inside, outside and all around the Atchafalaya basin, hunters flock in each fall for a crack at the white tail deer.

In the basin's many lakes and bayous, bass flirt with the lilly pads while catfish and gaspergou roam the deeper and darker currents of the main water runs.

Squirrels are in abundance just about any place you choose.

Civilization lies to the north and east, past the cane breaks into Baton Rouge, and Plaquemine, where Dow's Louisiana Division is headquartered.

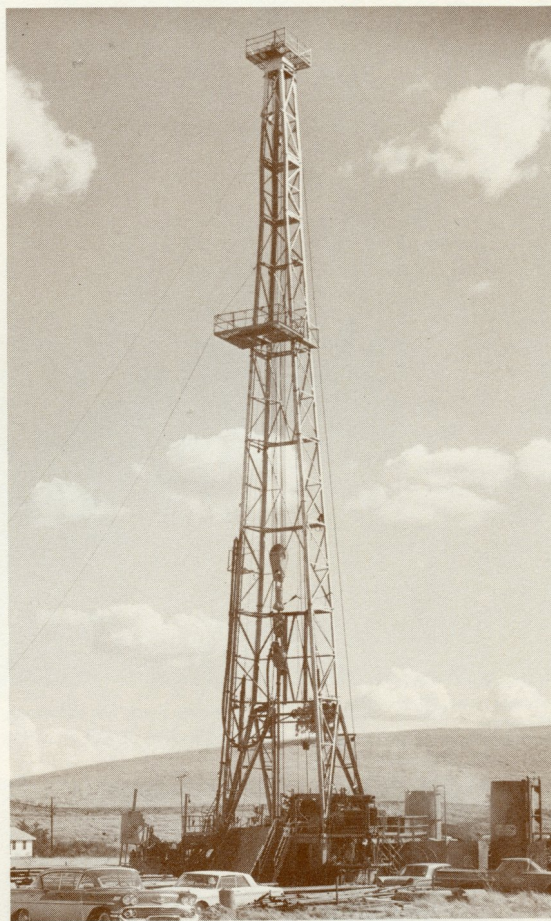
But the swamps provide the real romance. And considering the vast span of woods in these marshes, Brazos Oil and Gas still has a lot of productive courting to do.

❁ 1962 ❁

The Brentwood Field near Pittsburg, California was discovered in joint operation with Shell and Occidental Petroleum. Eight of the 13 wells drilled in California were in this area. A discovery well also was drilled in Texas.

During this period, gas purchase contracts were made with Texaco in Louisiana, and United Gas Pipeline in Texas.

In Texas, an 11-mile pipeline was completed to connect the West Lucky, El Maton and Southeast Markham Fields to the Brazos line near Bay City. This project involved bringing in new gas to the system from 14 producers in the area.



Heidron 4-4 Wellhead—Brentwood, California

Flying Pipeline Patrol With Brazos Oil and Gas

If you should happen to be driving between Brazosport and Bay City some afternoon and see a green Cessna 180 doing some sharp banks off the tree tops, don't fret about the pilot being in trouble.

The chances are it's Fred Pearce on a routine pipeline patrol for Brazos Oil and Gas—and there's no reason to be concerned about him, he knows what he is doing.

But if you feel a need to worry about somebody, put in a thought or two for the passenger. He might be a first-timer on the patrol, just turning green after leaving the bottom of his stomach at that last wing-over.

Bumpy But Effective

Riding pipelines with Pearce is not exactly the same as jetting to Philadelphia. But if some of the ride is a little bumpy, the effectiveness of the air patrol is blue bird smooth.

Pearce is the "eye" for Brazos as far as its pipeline network is concerned. He can spot many things out of pocket—and get remedy on the way—in minutes, where it would take a man on the ground hours, or even days, to do the job.

And in most cases, time is important.

For example, Pearce was on a routine flight to Houston recently and spotted a dragline starting to work on a drainage ditch in an area near a Brazos pipeline. He radioed immediately to field headquarters in Angleton and explained the situation. A crew was dispatched from the Angleton office to the spot where the dragline was working.

Saved Trouble

As it turned out, the dragline operator had not been briefed on the location of the Brazos pipeline. The Angleton crew staked it off, thus avoiding what could have been trouble, had the operator unknowingly broken the line.

Brazos' lines cover approximately 1,000 miles, as they wind through nine counties in bringing natural gas, ethylene, and liquid petroleum gas (LPG) into the Texas Division at Freeport.

Briefly, here are the sizes and originating points of natural gas lines into Freeport:

- A 12-inch from Collegeport.
- A 16-inch from Powderhorn.
- A 14-inch from Lakeview.
- An 8-inch from Angleton.

The Sargent gathering line, which is part 8-inch and part 4-inch, ties into the Collegeport 12-inch system.

The LPG lines to Freeport are as follows:

- A 4-inch from Katy.
- A 12-inch from Sweeny.

A 6-inch line from Katy, and a 6-inch line from Sheridan, tie into the 12-inch line at Sweeny.

Stripping Plants

Gas stripping plants or recycling plants where the LPG is acquired are located at Katy (Humble), Sheridan (Shell), Markham (Ohio), Sweeny (Pan-American), Old Ocean (Phillips), and Pledger (Humble).

These various companies pipe the LPG into Brazos pipelines, which bring the liquid product into the Texas Division. The gas is delivered under a pressure up to 1,000 pounds per square inch.

The Brazos ethylene lines into Freeport run from Texas City and Brazoria. The Texas City supply is originated by Gulf Oil at Port Arthur and piped to



THE BRAZOS PIPELINE PATROL AIRPLANE
Pilot Fred Pearce poses for a moment before takeoff

meet the Brazos line at Texas City. The Brazoria line taps Phillips' Sweeny-to-Houston flow.

This overall system is divided into two areas, with the San Bernard River being the cutoff point. Everything east of the San Bernard is in Area 1, with headquarters at Angleton. Everything west of the river is in Area 2, with headquarters at Bay City.

Twice a Week

Pearce specifically flies pipelines two times a week, taking Area 1 on one day, and Area 2 on the next trip. It generally takes him 3½ hours to cover Area 1, and 4½ hours to cover Area 2. He is in constant radio range of the Brazos office in Houston, as well as in range of the two field headquarters at Angleton and Bay City. With this tight communication plan, little—or nothing—is missed.

On these scheduled pipeline patrols, field supervision from the two areas usually accompany Pearce. Joe Munson, Angleton headquarters, flies on the Area 1 patrol, and Brit Horton, of the Bay City station, takes the Area 2 hop.

Since the pipelines are usually buried two to three feet in the ground, one might wonder how Pearce follows them, and even more so, how he can spot any leaks or other trouble.

First Things First

Taking first things first, he has been flying the lines for some 18 months, and by now, could just about trace them all by memory. But if memory should lapse, the lines are easily spotted from the air by (1) Brazos markings, (2) right-of-way clearances and (3) cattle trails.

When the lines are first put in, cows start their movements up and down the newly-dug trenches. And, according to

Pearce, they continue to use these trails on and on.

Spotting trouble along the pipelines is done by several methods. If the line carries natural gas, vegetation in the area of a leak will die and turn brown. If LPG is moving through the pipe, ice will form around any leaks and can be seen from the low altitude of 150 feet, which Pearce averages flying on patrol. The LPG is a liquid under pressure, and when it is leaked into the atmosphere it turns into a vapor which re-freezes, forming the ice.

Main Purpose

These are some of the things Pearce looks for. But the main purpose of his flights is to spot machinery that is being used for excavation work near a Brazos line.

His job is sort of like riding fence. He is not just looking for broken posts, but has his eyes peeled for anything that doesn't look right.

All of the Brazos pipelines are externally equipped with magnesium anodes for cathodic protection against corrosion. Precautions are also taken with the product to protect the inside of the pipes against corrosion.

Brazos maintains all of the lines within Area 1 and Area 2, as well as the ones between Plants A and B in the Texas Division. It is also responsible for LPG storage at Stratton Ridge.

Contract Crews

Sometimes pipelines must be placed deeper or moved to new locations because of construction of roads, bridges, canals, or plants. On these occasions, contract crews are on call to handle the job.

Brazos takes care of the inspection of all the lines, including the work done by contractors. At regular inter-

vals, metering stations and dehydration plants are also inspected by Brazos personnel.

R. A. Beutel, vice president and general manager of Brazos Oil and Gas, directs all operations, with Tom Mandrell in direct charge of the pipeline system.

The air patrol has been in use for several years, but in earlier days all of the pipeline checking was done on foot. And still, the LPG lines are walked twice a year, and the gas lines once a year for close visual checks of every foot.

Pearce, who works on a five-day schedule issued monthly by the Houston office, is always on the lookout for the pipeline system, whether he is flying a patrol or not.

He spends an average of 90-100 hours in the air every month. And each time his wheels leave the strip, he checks in with the Houston office so he can be reached at any time if his plane is needed in the field.

Other Duties

In addition to flying pipelines, Pearce makes an aerial check of the Brazos River once a week for any oil dumping or illegal pumping. He also flies various Brazos personnel on inspections and various other business trips. He is on call for emergency hops to field stations or other spots when equipment or men are needed in a hurry.

Pearce has been flying since 1939. He began executive pilot duty in 1945, having worked with Warren Petroleum in Houston prior to joining Brazos three years ago.

He is an excellent pilot and a compassionate man. You will appreciate both on your first pipeline patrol.

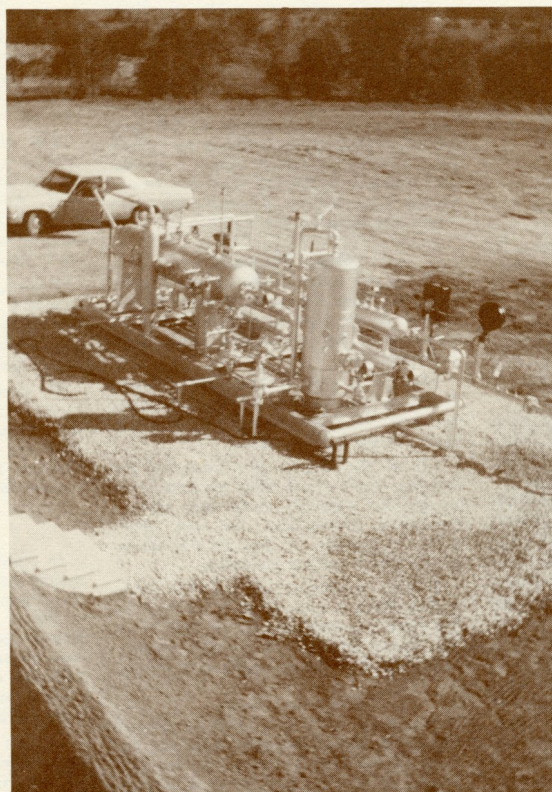
❁ 1963 ❁

Substantial gas and condensate reserves were established by the drilling of an exploratory well in the Southwest Lake Arthur Field, Cameron Parish, Louisiana.

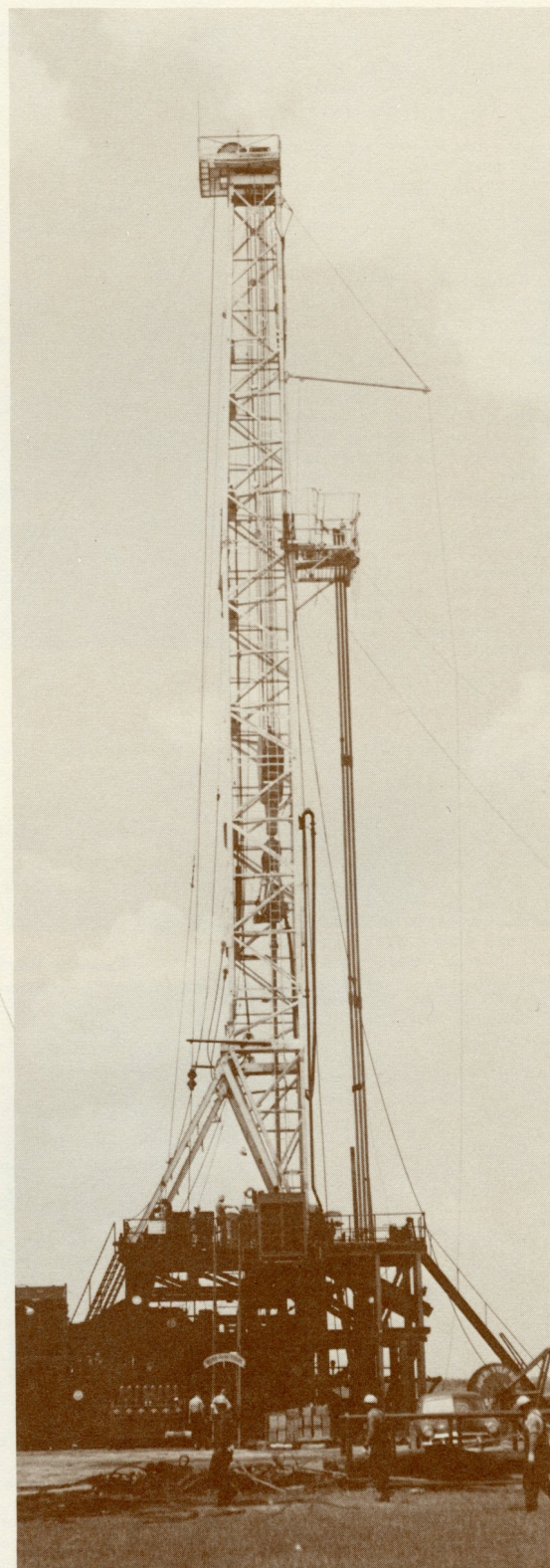
Activity in the Brentwood Field, California continued with the drilling of 22 wells. Discovery wells were completed in California, Louisiana and Texas.

A secondary recovery program utilizing "Pusher" chemical was initiated this year with the acquisition of the Vernon Field property in Woodson County, Kansas.

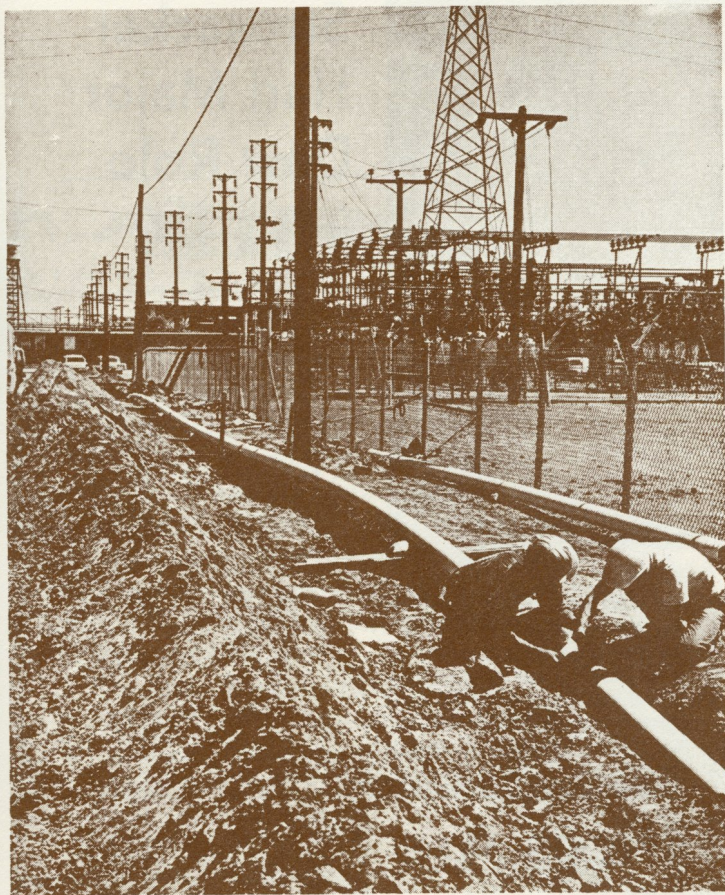
During the year, a nine-mile, ten-inch natural gas pipeline was constructed jointly with Shell from the Brentwood Field to the Pittsburg Plant of the Dow Western Division.



Separator—Percy David No. 1, Southwest Louisiana



Percy David



NEW PIPE GOING DOWN

Joints of pipe in new Brazos line are shown being taped as work went on along Lovern Road near Dow's Western Division at Pittsburg, California.

Community College Sets Registration

Registration for the fall semester of the Brazosport Community College will be held Monday, September 16 at Brazosport High School.

Shop, vocational, and industrial classes will be registered in room 215, with registration for non-vocational classes being held in room 213.

All classes will begin the week of September 23.

Vocational courses available include machine shop practice, blueprint reading, basic and advanced radio, basic television, motor rewinding, pipe drafting, machine drafting, cabinet making, and instrument repair. Others will be considered on request.

Non-vocational courses available include beginning and advanced typing, beginning and advanced shorthand, beginning and advanced bookkeeping, conversational Spanish, clothing construction, tailoring, general woodworking, and jewelry crafts. Others will be considered on request.

Registration and tuition fee for non-vocational courses is \$25 per course, or \$45 for two courses. The cost for vocational courses is \$14.

Most classes will meet two nights per week. Non-vocational classes will meet 1½ hours each night for 18 weeks, with vocational classes meeting three hours per night for 16 weeks.

HERE'S HOW DADS & SONS MATCH UP

If you matched father and son correctly on page 3, you put the following numbers with these dads:

- 1—B. D. Miles
- 2—M. H. Thompson
- 3—W. E. Comley
- 4—A. C. Burkholder
- 5—J. C. Edwards
- 6—Ray Ledlie

SPOTLIGHT ON PEOPLE

Dr. W. L. Howard, Texas Basic Research, was guest speaker at the fifth anniversary meeting of the Brazos County Chapter of the National Secretaries Association last month. His subject was entitled, "The Soviet Union's Plan for Taking Over the United States and Their Progress to Date." The meeting was held in Angleton.

Frank Fradella, Texas Zone 6, has been elected governor of area 2, district 56, Toastmasters International. Fradella is a past president of the Brazosport Toastmasters Club . . . Don Kahler, Chlorine 4, is the new area 2 secretary for the Toastmasters.

Brazos Uses New Line In California System

Brazos Oil and Gas is now supplying Dow's Western Division at Pittsburg, California with fuel gas through the first privately-owned pipeline to be operated in Northern California.

The nine-mile line, which originates in the new Brentwood discovery field southeast of Pittsburg, is jointly owned by Brazos and Shell Oil Company. Shell, with Brazos' cooperation, handled the construction of the line and will be the operator.

On July 24, Brazos began sending natural gas through the new line to the Pittsburg plants. The Western Division's daily requirement is about 6½ million cubic feet, of which 5½ million cubic feet is delivered through the new line. The other million cubic feet will be supplied by Brazos from its Isleton and River Island fields in the Sacramento River delta region.

Brazos, Shell, and Occidental Petroleum Corporation jointly own mineral rights on 4,500 acres in Brentwood, each holding a one-third interest in the estimated 24 billion cubic feet of natural gas reserves in the area. Shell and Brazos pipe out their own production, and purchase Occidental's share on a 50-50 basis. Shell is the operator of the joint acreage, which now includes six gas producers and five oil wells. Additional drilling is planned in the area.

"For the first time in our California operation, we are able to take our own production and transport it through our own system to our own plant," R. A. Beutel, vice president and general manager of Brazos, said. "Under this situation, we can better control the economics of our fuel gas needs in California, and also, Dow can map firmer plans for the future which involve the use of natural gas in this area," he said.

Prior to the construction of the new Brentwood Field pipeline, all natural gas handled by Brazos was transported through the Pacific Gas & Electric system.

The Brazos-Shell project was completed in the unusually fast time of one year. It includes a gathering system in the field, which Brazos and Shell own on 50-50 terms, the nine miles of 10-inch mainline, plus a 3,700 foot lateral line to the Dow plants at Pittsburg. The lateral line is 6-inch pipe, and the gathering system is made up of approximately two miles of 4-inch pipe. All of the pipe is protected against corrosion by extruded polyethylene.

Robert Weeks, chief engineer for Pipelines in the Brazos Division, worked with Shell and the Western Division in the design, construction, and initial operation of the new pipeline system.

Shell has extended the main 10-inch line five miles beyond Dow to its plants at Shell Point.

Brazos began operations in California in 1949 when it acquired producing properties in the Isleton and River

Island areas. However, these reserves have steadily dropped over the years, and it was necessary to find new production such as in the Brentwood discovery.



PROOF ENOUGH

W. H. Lowe offers proof that safety shoes are necessary items for full protection while on the job. He is holding such a shoe that saved him from serious injury in an accident recently. Lowe needed no urging to buy another pair of safety shoes. He is convinced of their worth.

SAFETY

(Continued from page 1)

made through the payroll deduction plan. No cash is used in the transactions.

In addition to getting a safe pair of high-quality shoes to wear, you may also win a prize. When an employee purchases a pair of shoes, his name will be put into a hopper and he will be given a receipt ticket stub. On four different occasions, a drawing will be held, with the winner receiving a fire extinguisher, first aid kit or a fishing tackle box. All names will remain eligible for all of the drawings. The first drawing will be made tomorrow, Friday, September 13. Other drawings will be held on September 27, October 18, and November 1.

There is at least one division employee who feels he is ahead of the game with a pair of safety shoes, whether he wins a prize or not.

Shoes Minimize Danger

He is W. H. Lowe, a pipefitter trainee in Zone 3. Lowe was saved from serious injury to his foot and toes recently by wearing safety shoes. He was struck on the foot by a flanged end of eight-inch pipe when a loading line slipped.

While he suffered an injury, it was minimized to a great degree by the hard-toe of his safety shoe.

Safety shoes are handy to have on, whether at work or at home mowing the lawn.

So how about it.

Have you bought yours yet?

Dow Announces 40-Cent Dividend

The Dow Board of Directors has declared a dividend of 40 cents per share on its common stock payable October 30, 1963 to stockholders of record on September 30, 1963.

RETIREE

Joe Love Kennedy retired as an electrician from the Texas Division Rectifier Department on March 22. The following was written by one of his fellow employees.

I Worked With Him . . .



KENNEDY

I worked with Mr. Joe for 16 years. He may not be known as a master craftsman, but neither is he a "jake-leg" in any sense of the word. He is a man of many talents—fisherman, electrician, designer, builder, carpenter, cabinet maker, mason, gardener,

teacher—and he excels in any or all.

How well educated Mr. Joe is I do not know. But I do know that he is able to associate freely with men from all walks of life.

His outstanding characteristic has been patience. He has exhibited patience in everything he has undertaken. We who have worked with Mr. Joe will remember him and his work when we think of our early training . . . of the patience he showed in teaching us, and the patience he had in his approach to any new job, or to an old one that needed re-working.

In passing, this note would not be complete without mentioning the power "behind Mr. Joe's throne," known to most of us as Lou Kennedy, his wife. Lou has been a good friend and is admired and loved by all of us.

Mr. Joe is well-liked and admired by those with whom he has come in contact, and his leaving will not soon be forgotten. We hope he will carry with him our best wishes for a good and full life ahead. —Lewis G. Conner

Book Donations Are Requested

Members of the Brazosport group of the South Texas Section, American Institute of Chemical Engineers, are cooperating in a project to set up chemical engineering libraries at several Latin American universities.

The International Relations Committee of the South Texas Section is heading up the project.

Donations of used textbooks and technical journals from individuals are being solicited. It is preferred that the journals be for a complete year, rather than scattered issues, but all contributions are needed.

Anyone wishing to donate books or journals may contact one of the following Texas Division employees:

C. L. Wheeler, B-2224, G. E. Durlinger, A-808, or V. A. Klein, B-1201.

California Office Hires New Engineer

Barry A. Boudreau, formerly with Tidewater Oil Company, has joined Brazos Oil and Gas as a field engineer in the Isleton, California office.

Boudreau, who worked for Tidewater Oil in California from 1959 to 1963, attended the University of Southern California.



CITATION FOR HEROISM

James T. (Buddy) Hargrove, Texas Division Rectifier Department who is in the National Guard, is shown looking at a trophy presented him and two other guardsmen for heroism. They were credited with saving the lives of an elderly couple at Angleton during Hurricane Carla, when they rescued the pair from their flooded home. The award and individual citations were presented to the men by Major General Seldon Simpson, Commander of the 36th Infantry Division. The other two guardsmen were M. A. Angell and L. A. Garick. All three men live in Angleton.

New Brazos Offices Are Completed at Bay City

Employees of Brazos Oil and Gas at Bay City were scheduled to move into a new office building Tuesday as part of an overall centralization plan for the district. Located at Cypress and First Streets in Bay City, the one-story, 5,000-square foot building completes the 4½-acre site designed for the district's central facilities.

These facilities, which have been arranged for during the last year, include:

- The new office building.
- The old 2,400-square foot office building which will be used for storage and possibly an engineers' laboratory.
- A 2,400-square foot roustabout headquarters.
- A 2,400-square foot warehouse building.
- Two company houses.
- Pipe storage yard.

All Brazos employees in the Bay City District, which includes 22 in the new offices and 8 in the roustabout headquarters, will operate from this central location.

The new building—which includes Dow materials—was designed for 22 offices by Koetter and Tharp of Houston. It was built by the Alvin Construction Company. A court on the south divides two wings, giving the structure a U-shaped design. Hallways separate offices down the east and west wings, as well as along the middle section. The building fronts on Cypress Street.

The Dow materials used in construction included polyurethane foam, styrene-butadiene base latex paint, and Styrofoam.

Heading up the Bay City District organization are Ray Swanke, Pipe lines, and Maurice Lewis, Drilling and Production.



Brazos Board & Guest Visit Bay City

Strosacker Had Major Dow Role

Dr. C. J. Strosacker, Dow vice president and director, died March 27 in his home at Midland.

A veteran of more than half a century with Dow, Dr. Strosacker was 80 years old.

He was graduated from Case Institute of Technology in Cleveland in 1906, joining Dow two years later as an analytical chemist. In his early days with Dow, he was connected with the commercial development and large-scale production of many products, such as ethylene, monochloroacetic acid, ethanalamines, pharmaceuticals, styrene, and others, including two famous plastics—styron and saran.



STROSACKER

Pure Butadiene

He also was concerned with the first commercial production of pure butadiene which, with styrene, became the core of the synthetic rubber program in World War II. His department was largely responsible for Dow's expansion in plastics production.

Best known of the product developments in which Dr. Strosacker played a major role, however, is Saran Wrap, Dow's first consumer product.

Dr. Strosacker, who was born at Valley City, Ohio in 1882, became a Dow director in 1930 and a vice president in 1941. He also had been a member of the Executive Committee for many years.

Doan Pays Tribute

Herbert D. Doan, Dow president, said in tribute: Our loss in the death of Dr. Strosacker is more than the loss of a colleague and counselor. His influence on the pattern and growth of Dow, in the years since he came to Midland in 1908, is beyond measuring.

"With vision and determination, as well as genius in chemistry, Dr. Strosacker pioneered Dow's work in petrochemicals, plastics, and many other materials. Our present rank as a major producer of plastics traces in great measure to Dr. Strosacker's efforts.

"Extensive as it was, his work in Dow—in research, in production, as a director, vice president and executive committee member—was only part of his life. He gave generously of his time and his means to the community, to his church, and to his college.

"His friends are countless. To many of us in Dow, he was a source of strength and advice, encouragement, leadership, and example. In all he did, Dr. Strosacker demonstrated his concern and regard for people, for the individual in every walk of life. And surely, he helped make this concern a part of our company's philosophy.

"Each of us, in his death, has lost a great and good friend and fellow-worker."

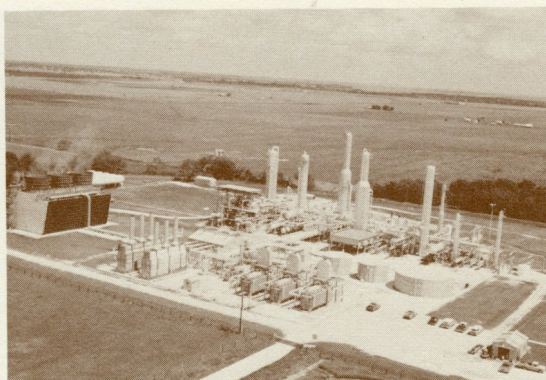
Funeral services for Dr. Strosacker were held in Midland on March 30.

❧ 1964 ❧

Nine wells were drilled in the Brentwood Field, California and three wells were drilled in the Southwest Lake Arthur Field, Louisiana; also, a discovery well was completed in Texas.

A second ethylene line was constructed from Freeport to Texas City and placed in operation in December and plans to build a natural gas liquids processing plant near Bay City, Texas were announced by Coastal States Producing Company and Brazos.

The Brazos Division and Continental Netherlands Oil Company announced a joint venture for exploration in the North Sea off the Netherlands in June.



Bay City Plant

❧ 1965 ❧

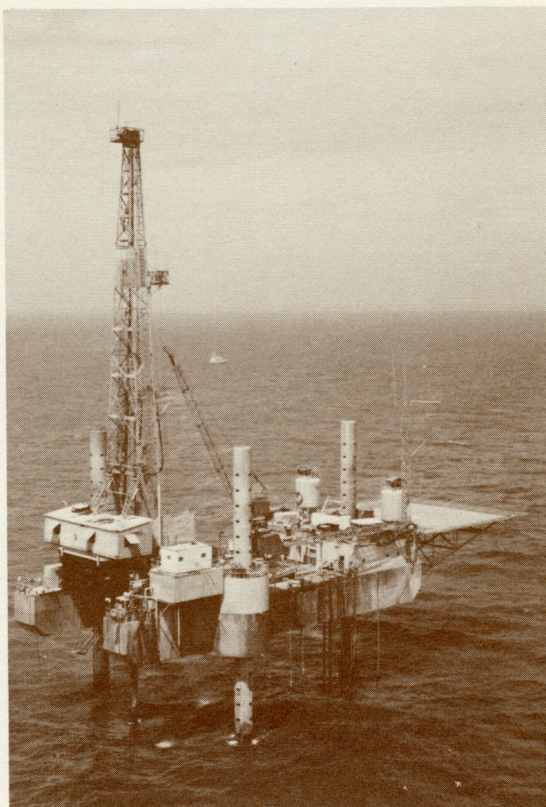
Brazos bid for and received leases from the State of Texas totaling \$9,860,000.

A twelve-mile, ten-inch pipeline was constructed, as a joint project with Shell, from Dutch Slough to Pittsburg, California.

The oil and gas operations with Continental Netherlands Oil Company were transferred from Brazos to Dow Chemical International, Oil and Gas Division.

Three wells were drilled on leases acquired in the Gulf of Mexico; one in the Netherlands. Also, three wells were drilled in the continuing development of the Southwest Lake Arthur Field, Louisiana.

The Shell Buccaneer gas was first delivered to the Texas Division on December 30. This contract for gas was administered by Brazos.





❧ 1966 ❧

The principal activities during this year revolved around the joint venture with Coastal States Producing Company in drilling six wells on leases in the Gulf of Mexico.

During this year, Dr. A. P. Beutel relinquished his duties with the Brazos Division and Macauley Whiting assumed responsibilities for directing all division activities.

A total of 17 wells were drilled.



Macauley Whiting

❧ 1967 ❧

The oil and gas properties in the Isleton, River Island, and Walnut Grove Areas were sold to the Union Oil Company of California for \$2,200,000.

Luther Evans was appointed general manager in March to succeed R. A. Beutel. A total of four wells were drilled resulting in three gas completions.



NATIVITY SCENE

Bobby Legler and Don Hutson, Texas Division employees, combined to make this Nativity Scene out of Dow products by using a technique developed by Legler. The work is on exhibit in the Research Center.

MERRY CHRISTMAS

The following poem was written by Bert Kennedy, a painter crew leader at Plant A.

As I stood in my door-way,
Looking down the street,
I saw this little boy approaching,
Who had no shoes on his feet.

His clothes were thin and ragged,
And I could see tears on his cheek,
He said, "Peace," to you mister,
Could you spare a bite to eat?

I stepped aside, and said enter,
For we are about to dine,
The table is filled with a Christmas Dinner,
You be my guest for I don't mind.

He replied, It's not for me, but Mother,
She's sick and all alone,
We live in a shack at the edge of town,
It's what we call our home.

I deliver and sell papers,
To buy the things we eat,
But on this Christmas, I said I'd beg,
And promised to get her something sweet.

I was silent for a moment,
And I had tears in my eyes,
For the spirit of Christmas hit me,
And I had thought, it had passed me by.

You sit at the head of the table,
And eat all you can hold,
Then we will fill a great big basket,
And I will deliver it to your home.

I'll get a doctor for your Mother,
And put shoes on your feet,
This will be my best Christmas ever,
Because of you, who came from the street.

If you like my Christmas poem,
Please let others read.
It may bring to them a Christmas spirit,
And they will give to those who need.

Changes Announced By Brazos Division

A realignment of responsibilities affecting three management positions within the Brazos Oil and Gas Division of Dow has been announced by Luther Evans, Brazos general manager.

The three changes are:

—Robert Weeks, formerly manager of Land and Exploration, becomes manager of Exploration and Development, assuming reservoir engineering responsibilities that were formerly a part of the Drilling and Production operation.

—Thomas C. Mandrell, who has been manager of Pipeline Operations, now becomes manager of Operations in charge of all field operations.

—John S. Talbot, transfers to Brazos in Houston to become manager of Engineering and Drilling, taking over part of the duties now assigned to G. P. Huston who will retire December 31, as manager of Drilling and Production.

In addition to the drilling responsibilities that had been assigned to Huston, Talbot will be responsible for division engineering responsibilities that had formerly been dispersed throughout the organization.

Talbot will also retain responsibility for deep-well disposal activities as an additional duty, continuing to report in this area to the Environmental Control Systems Business of Dow's Functional Chemicals and Services Department in Midland.

Weeks joined Dow in 1952 as an engineer in the Texas Division and transferred to Brazos in 1961 as chief engineer of pipeline operations. He became manager of the Land Department in 1964 and manager of Land and Exploration in 1965. He earned a B.S. in petroleum engineering from Texas A&M University in 1950.

Mandrell also transferred to Brazos in 1961 from the Texas Division. He had joined Dow in Texas in 1948 as an engineer and was named superintendent of the Gas and Water Department in 1951. He has been manager of Pipeline Operations since joining Brazos. He is a graduate of

the University of Oklahoma in chemical engineering.

Talbot joined Dow in 1946 in the Dowell Division's Cleveland Office and became a Dowell district manager in Houston in 1950. In 1959 he became operations manager for Dow Industrial Service and in 1966 he was named manager of Deep Well Disposal Services in the Chemicals Department. He is a petroleum engineering graduate of the University of Oklahoma. He was on the board of directors of Dowell Schlumberger in Paris, France, from 1963 to 1966.

Pete Schumm Transfers To Australia

O. F. (Pete) Schumm, who has been with Dow's Texas Division since 1950, will transfer to a new operation in Brisbane, Australia the latter part of January, 1968.

The Australian operation is a fertilizer manufacturing and marketing concern known as Austral-Pacific Fertilizers Limited. The company was established to do business throughout Australia by Dow and Swift and Company, from the United States. Other major industrial firms are expected to participate in the equity ownership.

Initially Austral-Pacific Fertilizers Limited will manufacture ammonia and urea, and market a full line of fertilizer materials.

Schumm's responsibility in the new company will be to construct and get the ammonia plant started. The major facilities will be built on Gibson Island in Brisbane Harbor. In addition to the ammonia and urea plants, initial construction will include related offices as well as docks, warehouse and packaging facilities for both export and domestic materials.

The company will have a network of mixing and blending plants in South Wales to tailor fertilizers to the local needs of the agricultural industry.

The U. S. companies will provide skilled technical persons to assist in plant start up and operations. Marketing and agronomy specialists will help develop and implement advanced plant nutrient application techniques. Permanent operating personnel, however, will be Australian.

Until his appointment to the Australian company, Schumm was superintendent of Texas Division ammonia production. He joined the division in 1950 as a chemist. He worked in caustic production and was then transferred to the ammonia operations. In 1956 he was promoted to production plant assistant superintendent. In 1962 he was promoted to plant superintendent.

Schumm earned a B.S. degree in chemistry from Texas A&M and a master's degree in chemistry from Purdue University.

Dividend Declared

Dow's board of directors has declared a dividend of 55 cents per share on Dow common stock payable January 30, 1968, to stockholders of record at the close of business on December 29, 1967.

The **DOW** *Texan*

DOW, TEXAS DIVISION • FREEPORT, TEXAS
AN EQUAL OPPORTUNITY EMPLOYER

JIM COPE

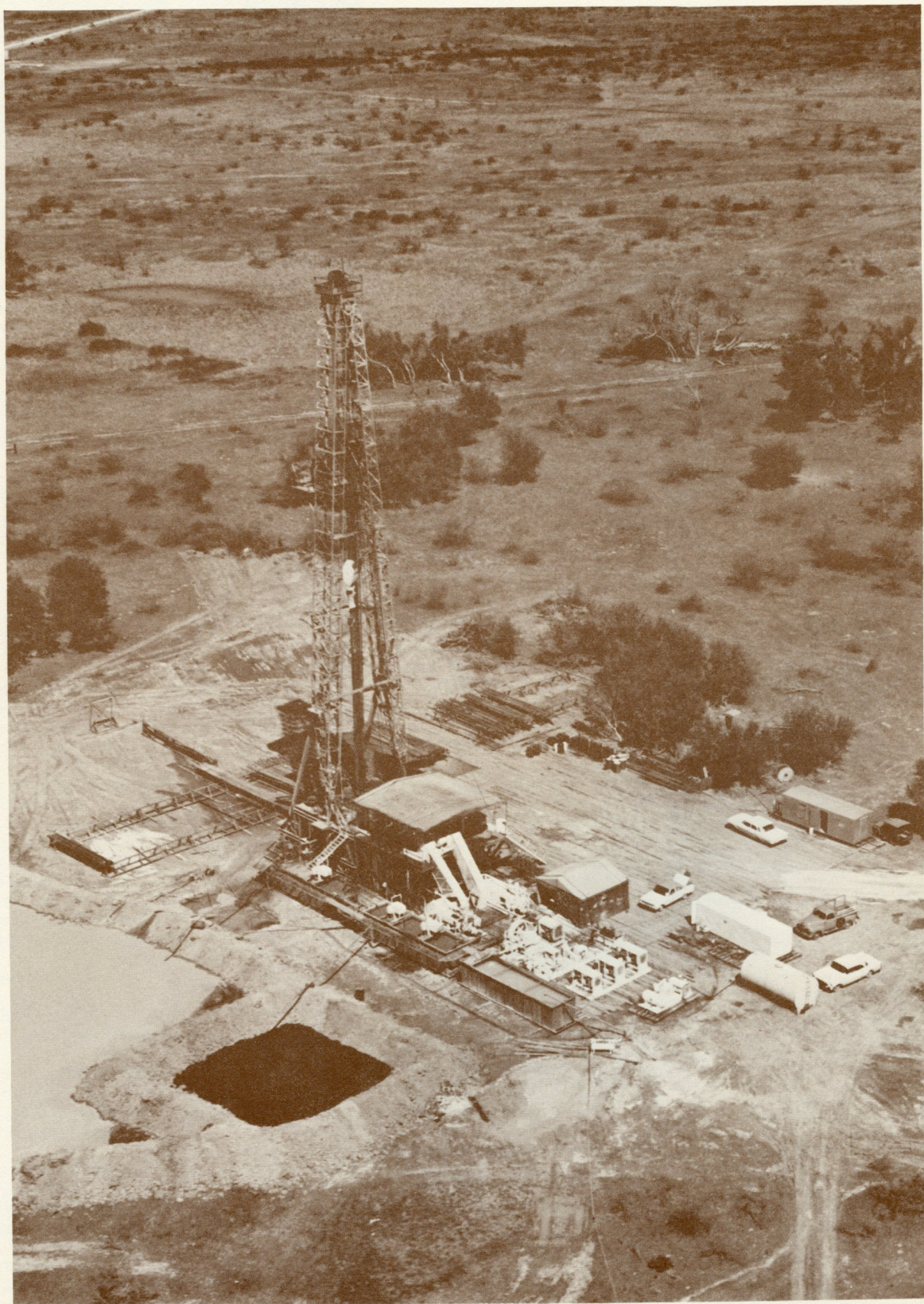
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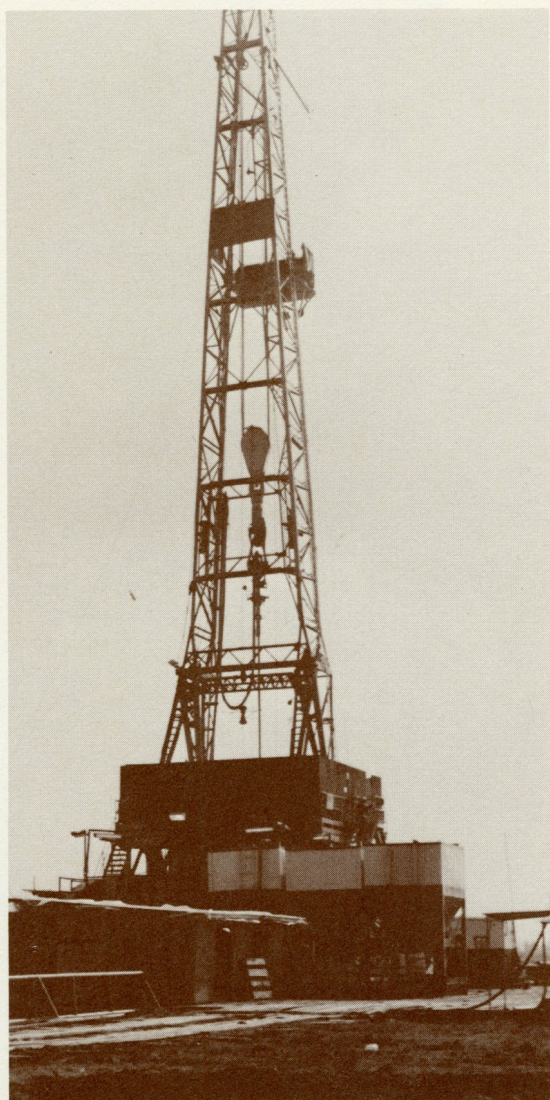
Published Monthly
Houston, Texas

❖ 1968 ❖

A total of 23 wells were drilled, resulting in 12 producers. This included three discoveries in Louisiana at Grand River, Pat Bay and Southwest Lake Arthur. Another discovery came in Texas at East Powderhorn.

The first Dow-Conoco Netherlands onshore well was drilled in May.





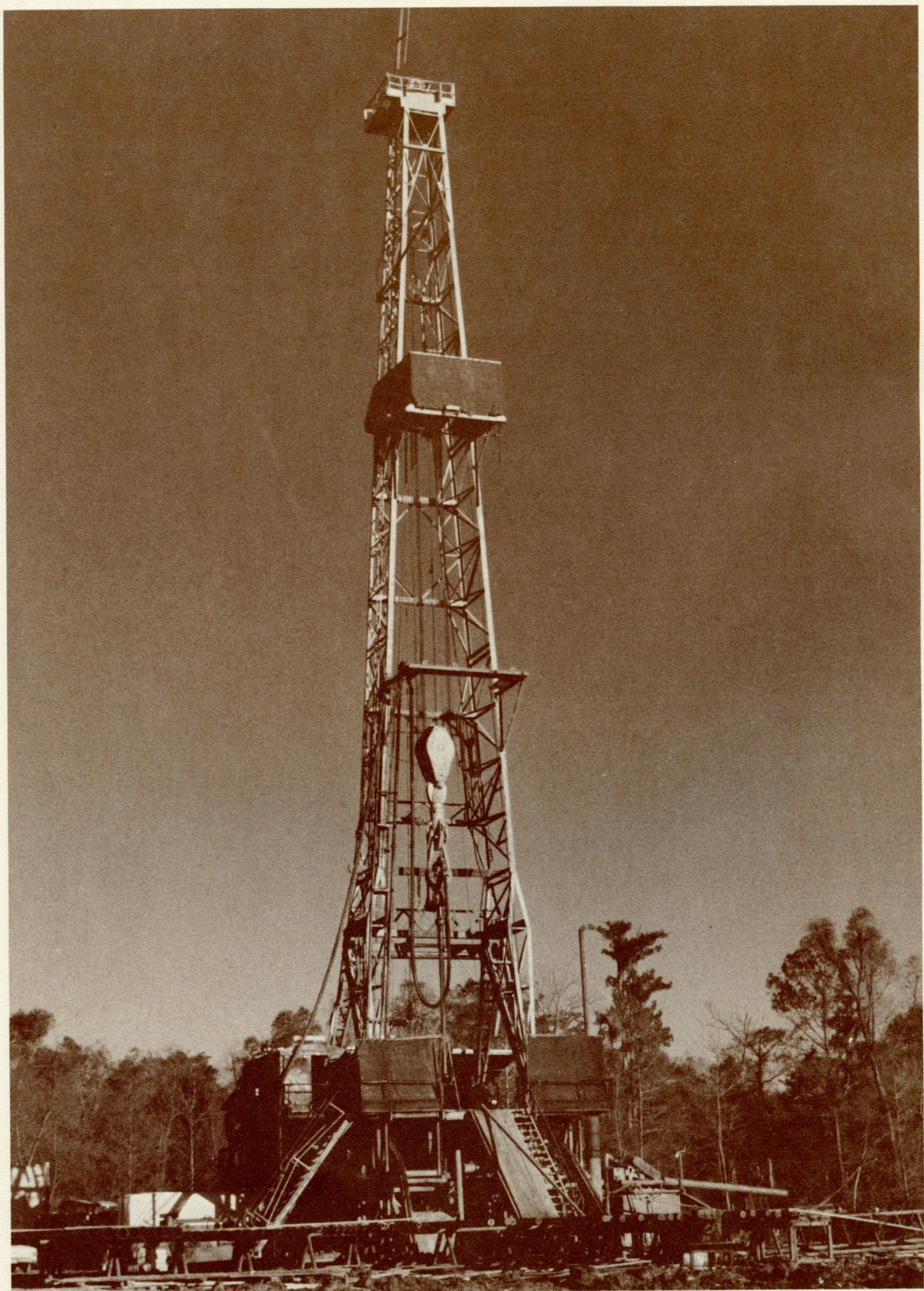
Felix Baque No. 1

❧ 1969 ❧

The Pipe Line Department and related facilities were transferred from the Brazos Division to manufacturing locations. Brazos Division personnel were assigned to the organization, management and control of all oil and gas exploration and production programs.

Increased activity in Texas accounted for 18 of the 29 wells drilled, and included two discoveries, one being in the Northwest Bayou Bleu Field in Iberville Parish, Louisiana.

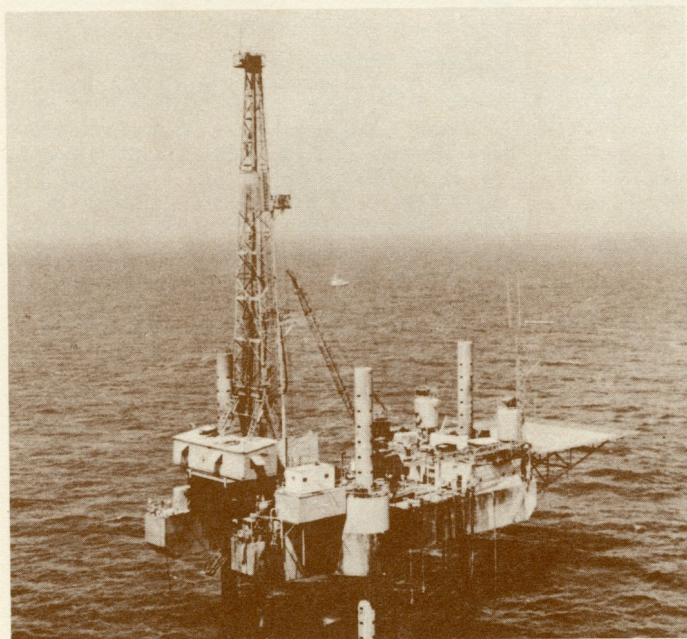
All operations in Kansas were closed out as of July 1, concluding participation in the "Pusher" program.





BRAZOS DIVISION OPERATING COMMITTEE

Members of the Brazos Division Operating Committee are (standing) R. W. Wright, Brazos Controller; V. H. Buckley, manager of Regional Legal; J. S. Talbot, manager of the Drilling and Production Department; and Lamar Ramsey, rotating secretary. Seated are T. C. Mandrell, manager of Petroleum Operations and Utilities Distribution for the Texas Division; Luther Evans, general manager of the Brazos Division; and Robert Weeks, manager of the Exploration and Development Department.



OFFSHORE WELL

This well was drilled by the Brazos Division to a depth of 9,500 feet in 1968 on offshore Texas leases.

The Brazos Division... A History of Growth

The Brazos Division came into being in the form of the Brazos Oil and Gas Company, a wholly-owned subsidiary of The Dow Chemical Company in 1947.

The occasion was the purchase by Dow on April 15 of that year of the oil and gas reserves on 8,200 acres in Matagorda County, Texas, known as the Collegeport Field. An organization was needed to complete the development of this 8-well shut-in gas field and produce the gas for delivery to Dow's Texas Division at Freeport. Dr. A. P. Beutel was the first president of the new corporation, with J. P. Bryan of Freeport serving as vice president as well as general counsel for the Texas Division. In 1953 L. B. Swan came to Brazos from Dowell as executive vice president and general manager. The reasons for Brazos to take the form of a separate corporation disappeared, and in 1955 Brazos became a division of The Dow Chemical Company. R. A. Beutel served as vice president and general manager for the next ten years. The Brazos Division is now a part of Dow's Basic Resources organization, managed by Macauley Whiting, a member of Dow's Board of Directors. Since early 1968 Luther Evans has been the division general manager, reporting to Whiting. Mr. Evans had previously been general manager of the Rocky Flats plant in Colorado.

From 1961 to mid-1969 Brazos responsibilities included the transportation of fuel gas, petrochemical or refinery feedstocks and byproducts, and the operation of related facilities, including pipelines, processing and underground storage facilities for the Texas and Western Divisions.

It was the tremendously expanded, and still expanding, needs of the eight-year-old (in 1947) Texas Division for fuel gas for generation of electrical power for magnesium and chlorine that decided Dow to make the initial venture into the

petroleum production industry. Dow's backward integration into petroleum seems to be a continuing process, with the higher hydrocarbons being no less important to Dow now than fuel gas was in 1947.

Brazos Division contributes to Dow basically through the activities of exploring for, and developing and producing crude hydrocarbons. Brazos, in 1968, produced gas and liquids equivalent to gas amounting to 46 billion cubic feet, from 175 wells in Texas, Louisiana and California. By the end of 1968, Collegeport, Brazos' field of entry into the oil industry, had produced gas, and liquids equivalent to gas, totaling 331 billion cubic feet; it is now only one of 15 oil and/or gas fields in which Brazos has a working interest. Brazos is also responsible for management of 55,000 acres of Dow fee lands in Louisiana.

Although Brazos has foreign production at this time, the nature of Dow's global operations is such as to be directing a substantial part of its current exploration efforts outside the United States. In 1968 about 63 percent of Brazos Division income was from sales to outside companies, with the other 37 percent from gas and LPG (liquefied petroleum gas) supplied directly to Dow manufacturing locations.

Brazos activities are overseen by a Division Operating Committee, including Evans as chairman; the three department managers: Robert Weeks, J. S. Talbot and Robert W. Wright; Vincent H. Buckley of Regional Legal; and T. C. Mandrell, Texas Division manager of Petroleum Operations and Utilities Distribution (until mid-1969 manager of Brazos' Pipeline and Production Operations).

The major functional groupings are as follows:

The Drilling and Production Department is responsible for the design and drilling of wells needed for exploration and development and for overseeing operations which Brazos con-

See Brazos Page 3



Brazos Receives Safety Award

A certificate of achievement granted by the Manufacturing Chemicals Association, Inc. has been received by the Brazos Division. The certificate was presented by Macauley Whiting (left), Dow's director of Basic Resources to Maurice Lewis, Brazos Division. The award is in recognition of their achievement in the prevention of personal injuries, operating without a disabling or lost time injury for the year 1969.



J. A. Master

Master Awarded Highest Grade in Educational Course

J. A. Master, E&CS, has successfully completed an educational course in "Concrete Quality Control" conducted by the Houston Chapter American Concrete Institute. Awarded the highest grade in the class, he was extended an honorary affiliate membership in the Houston Chapter ACI for the year 1970-71 for his outstanding scholastic accomplishment.

A native of Pennsylvania, he is a graduate of the Drexel Institute of Technology with a degree in Civil Engineering-Construction Management. He joined Dow in 1968 as construction supervisor in the E&CS Construction Department in Freeport.

Active in civic affairs, Master is a member of the Angleton Planning Commission, Angleton Lion's Club and Angleton Jaycees. He is also chairman of a committee to provide a youth center for Angleton.

New Dow Drug Test Proves Successful

A new antibiotic developed by Dow is being credited by an Army medical research team at Fort Lewis, Washington, for all but eliminating the danger of meningitis among newly inducted recruits at the base.

The new drug, Rifampin, is being used in Europe for treatment of tuberculosis and is expected to shortly become available on a large scale basis in this country.

Meningitis is a serious problem for the Army in processing new recruits during basic training activities.

According to a spokesman for the Army, the new drug is especially useful in clearing up meningitis germs in the throats of carriers. He said about 20 percent of the civilian population carry meningitis germs but do not show symptoms of the disease themselves. They can, however, transmit the disease to others.

WELCOME New Employees

A hearty welcome to E. R. Frankson, A. A. Lovell, Jr., J. L. Wilson, E. D. Thomas, Jr., G. Pulido, R. H. Landry, G. E. Smallwood, W. M. Transeau, G. R. Mayes and L. W. Ickert, E&CS Civil Section . . . E. E. Sutton, D. M. Hebert, Sr., H. A. Duke, J. R. Salisbury, F. J. Czodli, J. N. Griffith, D. B. Smith and A. E. Spence, Jr., E&CS Piping Section . . . T. J. Fulmer, E&CS Mail Room . . . Janis Calvert, R. A. Fuchs, M. L. Griffin and J. Williams, E&CS Design Planning . . . C. W. Hooser and C. A. Leeson, E&CS Reproduction . . . C. J. Evans, R. B. Porter, M. C. Raney and O. P. Tipton, E&CS Construction, Freeport.

Joyce Dickens, Sharon Jackson, Betty Latocki, Janet Jackson, Mary Jane Kirkley, Lynelle Eixmann, Marilyn Feagins, Frances Mitchell and Ethyl Edgar, E&CS Secretarial Services . . . S. G. Thibadeau and D. D. Baxter, Brazos Division . . . M. E. Crawford, C. B. Meyer, J. L. Womack, A. H. Wickman and W. D. Spain, E&CS Engineering Administrative Services . . . E. W. Beck, E&CS Instrument Section . . . R. R. Geinitz, L. F. Fraser, R. Wenzel, C. G. Johnston, J. K. English and R. G. Floyd, E&CS Mechanical Section . . . C. E. Bass, E&CS Architectural Section . . . D. G. Solomon, D. W. Hilliard, C. M. Impson and H. Felix, E&CS Electrical Section . . . Ron Dickerson and J. F. Green, Houston Sales Office.

❁ 1970 ❁

During this year, approximately half of the drilling was done in Louisiana for early development of the Northwest Bayou Bleu Field. Also, preliminary plans were laid for an exploration program in Australia. Discoveries were made at North Bayou Sorrel in Louisiana, and West Sheridan in Texas.

A total of 27 wells were drilled.

❁ 1971 ❁

A program for drilling with Texas Oil and Gas Company was inaugurated with Brazos participating in 18 wells. Also, arrangements were made to join with North American Royalties in its exploration program in the West Texas Area, which resulted in the participation in seven wells. Brazos participated in twice the number of wells as in the previous year, with the principal drilling in Louisiana and Texas. During this year, a well also was drilled in Australia. This increased activity resulted in four discoveries in Louisiana at Northeast Bayou Bleu, Diamond, Ship Shoal, and Parcperdue, and two in Texas at Jewett and Krueger.

A total of 56 wells were drilled.



Wellhead Clute No. 1 — Jenett, Leon County, Texas



Blanchard No. 1

Francis Hill 85-No. 2—Edwards County, Texas

❖ 1973 ❖

A total of 166 wells were drilled and resulted in the following discoveries:

Texas—Camp Hulen, Catarina, Chittim Ranch, South Freeport, offshore; Nueces (Penn) Field, Campanero (Canyon) Field, N. Campanero (Canyon) Field, Roy Baker (Canyon) Field, N.E. Rocksprings, Hoover Ranch, N. Gum Island.

Colorado—S.E. Colorado (Morrow).

Louisiana—W. Livonia and Bayou Bouillon.

Nebraska—Big Springs.



Brazos Oil and Gas Company and The Dow Chemical Company, Brazos Division

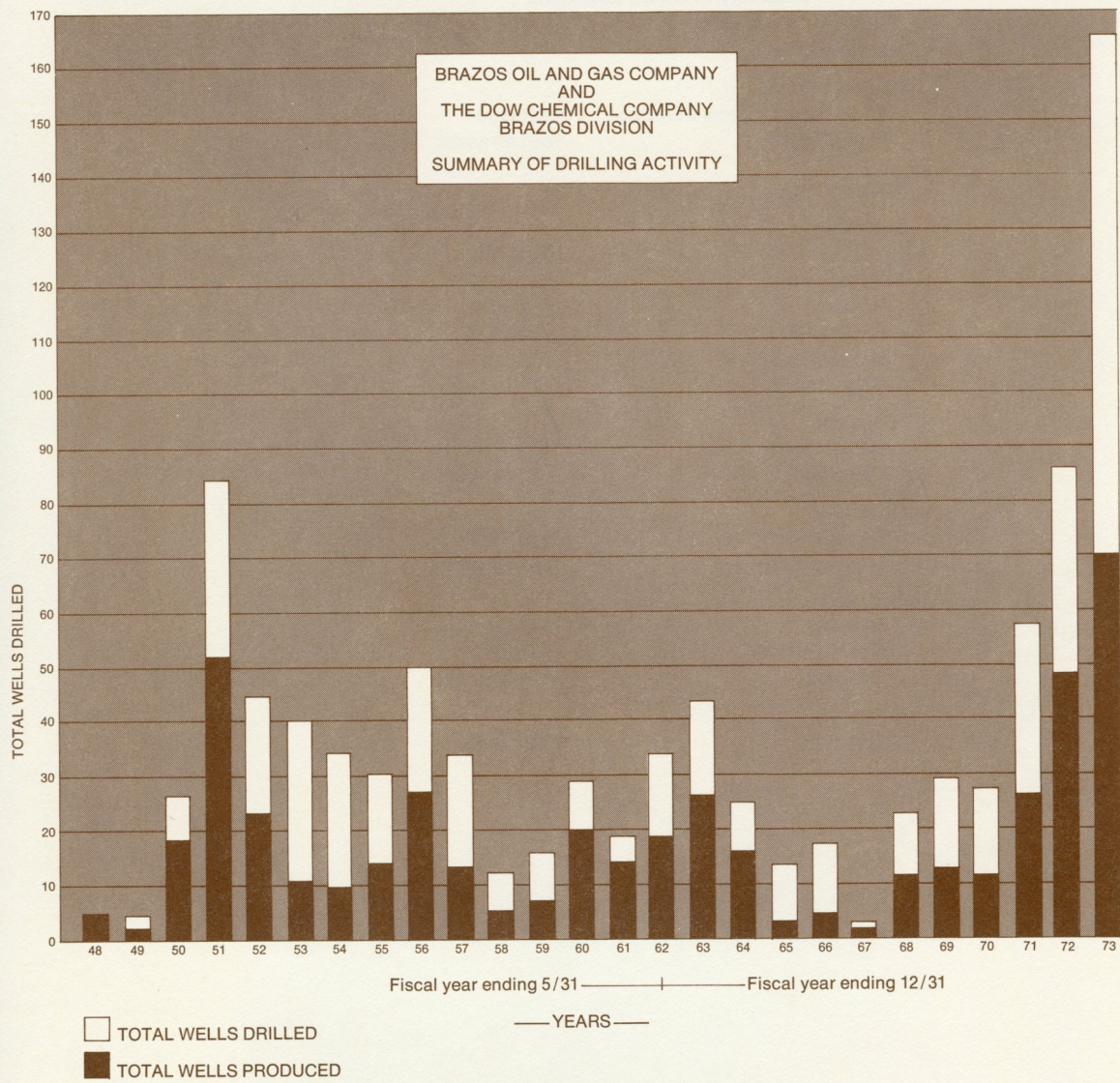
Summary of Discovery Wells by States

Field	Well	Completed	Type Production	Operator
California				
River Island	River Island Land Co. No. 1	6-50	Gas	Brazos Oil and Gas Company
Newhall	Needham No. 2	1-52	Oil	Union Oil Company
Willows	Capital No. 1	3-52	Gas	Honolulu Oil Company
Walnut Grove	Walnut Grove Unit "A" No. 1	8-58	Gas	The Dow Chemical Company
East River Island	M & T Inc. No. 2	8-59	Gas	The Dow Chemical Company
Brentwood	Heidorn No. 4-4	7-62	Gas	Shell Oil Company
Staten Island	Milton & Towne "A" No. 1	8-63	Gas	The Dow Chemical Company
Colorado				
S.E. Colorado (Morrow)	Sniff Ranch No. 1	1973	Gas	Texas Oil & Gas Corp.
Louisiana				
Ravenswood	Rex E. Callicott No. 1	4-61	Oil	The Dow Chemical Company
Southwest Lake Arthur	Percy David No. 1	8-63	Gas	The Dow Chemical Company
Grand River	Schwing-Levert No. 2	2-68	Oil	Midwest Oil Corporation
Pat Bay	E. B. Schwing No. 1	9-68	Gas	Hunt Oil Company
Southwest Lake Arthur	Dixie Rice Agric. Corp. No. 2	12-68	Oil	Union Producing Company
Bayou Bleu	The Dow Chemical Co. No. 2	1-70	Oil	The Dow Chemical Company
No. Bayou Sorrel	The Dow Chemical Co. No. 1	4-70	Oil & Gas	Coastal States Prod. Company
N.E. Bayou Bleu	A. A. Angelloz No. 1	5-71	Gas	The Dow Chemical Company
Diamond	Scott Beasley, Jr. et al No. 1	8-71	Gas	Tesoro Petroleum Corp.
Ship Shoal	Block 149 Ship Shoal No. 5	9-71	Oil	Belco Petroleum Corp.
Parcperdue	Felix Bacque Jr. No. 1	12-71	Gas	The Dow Chemical Company
So. Lucy	Louisiana Land & Exploration Company No. 1	12-72	Gas	Midwest Oil Corporation
W. Livonia	Major Estate No. 1	1973	Oil	Emerald Oil Company
Bayou Bouillon	Bayou Bouillon	1973	Oil	Edwin L. Cox
Michigan				
Cannon Creek	Miltner Shaffer Community No. 1	3-50	Gas	Brazos Oil and Gas Company
Chester	State Chester "HE" No. 1	5-52	Oil	Brazos Oil and Gas Company
Ludington	Dow-Brazos Unit No. 1	4-53	Oil	Brazos Oil and Gas Company
Nebraska				
Big Springs	Elmer Johnson No. 1	1973	Gas	Sage Oil Company
Texas				
Matagorda Bay	State of Texas "MA" No. 1	5-51	Gas	Brazos Oil and Gas Company
Cow Trap	J. L. Ducroz No. 1	9-51	Gas	Brazos Oil and Gas Company
Tres Palacios Bay	State of Texas "EB" No. 1	11-51	Gas	Brazos Oil and Gas Company
Clear Creek	M. O. Sledge Unit No. 1	2-52	Oil	Brazos Oil and Gas Company
Pargmann	Rudolph Kruse No. 1	5-52	Gas Cond.	Brazos Oil and Gas Company
Drum Point	Fletcher Trust Co. No. 1	7-53	Gas	Brazos Oil and Gas Company
Alligator Point	Houston Farms Development Company No. 2	12-53	Gas	Brazos Oil and Gas Company
S. C. A. R.	A. J. Scott et al No. 1	6-54	Gas	Brazos Oil and Gas Company
Stratton Ridge	Grover C. Cannon No. 1	11-54	Oil	Cockrell Corporation
See	Ed See Estate No. 1	10-55	Gas	Houston Natural Gas Prod. Co.
Styles Bayou	Austin Schalker No. 1	1-56	Gas Cond.	The Dow Chemical Company
Harrison	Lena S. Harrison No. 1	4-57	Oil	The Dow Chemical Company
Farwell Island	State of Texas Tract No. 215 No. 1	5-57	Gas	The Dow Chemical Company
Person	Otha D. Person No. 1	8-59	Oil	The Dow Chemical Company
Welder	J. J. Welder No. 1	3-60	Gas	The Dow Chemical Company
Mathews	C. J. Mathews No. 1	5-61	Gas	The Dow Chemical Company
Perry Landing	State Lease No. 49016 No. 1	11-62	Gas	Mobil Oil Company
East Swan Lake	Susie Coate No. 2	8-63	Gas	The Dow Chemical Company
Tinsley	Thaddeus Brysch No. 1	7-64	Gas	The Dow Chemical Company
East Powderhorn	State Tract No. 68 No. 1	11-68	Gas	The Dow Chemical Company
S. W. Alta Loma	A. B. Marshall No. 1	8-69	Gas	Buttes Gas and Oil Company
West Sheridan	Robert L. Zinn No. 1	8-70	Gas	The Dow Chemical Company
Jewett	M. G. Clute No. 1	11-71	Gas	The Dow Chemical Company
Krueger	C. L. Krueger No. 1	12-71	Gas	Intercoastal Production Co.
Sandy Creek	R. H. Hancock No. 1	2-72	Gas	The Dow Chemical Company
Holman	Francis Hill No. 2	4-72	Gas	North American Royalties, Inc.
S. W. Clemens Dome	H. A. Meyers No. 1	4-72	Gas	The Dow Chemical Company
Hoover Ranch	Hoover "66" No. 1	73	Gas	North American Royalties, Inc.
Camp Hulen	Palacios Ind. Dev. Co., Inc. No. 1	73	Gas	The Dow Chemical Company
Catarina	H. E. Stumberg, et al No. 2	73	Gas	The Dow Chemical Company
Nueces (Penn) Field	L. Harris "16" No. 1	73	Gas	North American Royalties, Inc.
Campanero (Canyon) Field	Banister No. 1	73	Gas	North American Royalties, Inc.
Chittim Ranch	Chittim Ranch No. 8-LJ	73	Gas	J-W Operating Company
N. Gum Island	Hebert-Broussard No. 1	73	Gas	The Dow Chemical Company
N. Campanero (Canyon) Field	Ragsdale "11" No. 1	73	Gas	North American Royalties, Inc.
Roy Baker (Canyon) Field	Baker "15" No. 1	73	Gas	North American Royalties, Inc.
N.E. Rocksprings	Phillips "3" No. 1	73	Gas	North American Royalties, Inc.
South Freeport, Offshore	State Tract 310L No. 1	73	Gas	P. R. Rutherford

Summary by Location of Gross Wells Drilled*

F.Y. End 5-31	Gross Wells Drilled	Calif.	La.	Mich.	Texas	No.	Other Location	Gas Wells	Oil Wells	Dry Holes
1948	5	1			4			5	0	0
1949	4	2			2			2	0	2
1950	26	10		5	10	1	Oklahoma	13	5	8
1951	84	17		29	38			47	5	32
1952	54	10		15	29			11	12	21
1953	40	12		11	17			9	2	29
1954	32	5		10	15	2	Wyoming	7	2	24
1955	31	8		2	21			9	5	17
1956	50	9		3	38			19	8	23
1957	34	6		8	20			6	7	21
1958	12	5			3	4	Wyoming	2	4	6
1959	16	3			12	1	Wyoming	4	3	9
1960	28	9			19			9	11	8
1961	19	10	1		8			9	5	5
1962	34	10	6	2	16			14	4	16
6 mo. period C.Y.	21	13	2	3	3			10	1	10
1963	43	27	2	4	10			8	18	18
1964	25	12	5	3	5			10	5	10
1965	14	3	4	1	2	1	Netherlands	4	0	10
						3	Gulf of Mexico			
1966	17	4	4		3	6	Gulf of Mexico	4	1	12
1967	4	2	2					3	0	1
1968	23	4	10		8	1	Netherlands	6	6	11
1969	29	2	8		18	1	Libia	8	5	16
1970	27		17		7	2	La. Offshore	3	8	16
						1	Netherlands			
1971	56	2	20		25	8	Oklahoma	19	6	31
						1	Netherlands			
1972	86	3	10		52	21	Oklahoma	44	5	37
1973	166	14	12		95	17	Oklahoma	61	9	96
						12	Colorado			
						12	Nebraska			
						2	Florida			
						2	New Mexico			

*Gross Wells drilled include all wells in which the Company participated, either as an Operator or Non-Operator.



Summary of Office Locations

Principal Office

Houston, Texas

City National Bank Building	1947-1961
Dow Center	1961-Present

District Offices

California

Isleton	1949-1952
Sacramento	1952-1958
Isleton	1958-1960
Sacramento	1960-1965
Bakersfield	1965-1971
Sacramento	1973-Present

Louisiana

New Orleans	1957-1959
Lafayette	1964-Present

Michigan

Roscommon	1949-1953
Mt. Pleasant	1953-1958

Texas

Bay City	1947-Present
Corpus Christi	1964-1966
Midland	1971-Present

Kansas

Chanute	1965-1969
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CLARK THOMPSON

Treasurer of Brazos from 1958-1966,
We wish to thank Mr. Thompson who compiled
much of the historical data presented in this book.



The Oil & Gas Division, Dow Chemical U. S. A.